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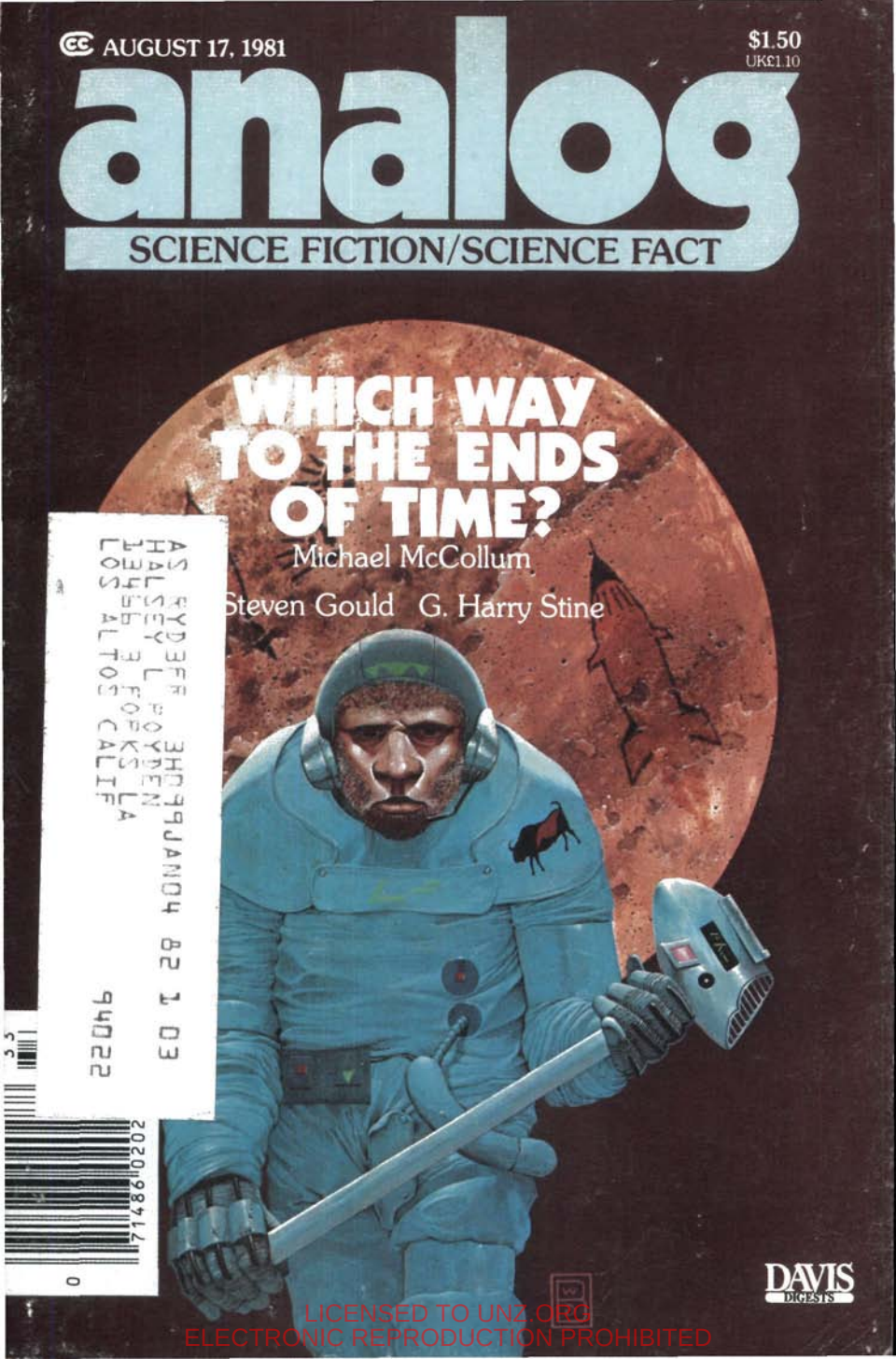

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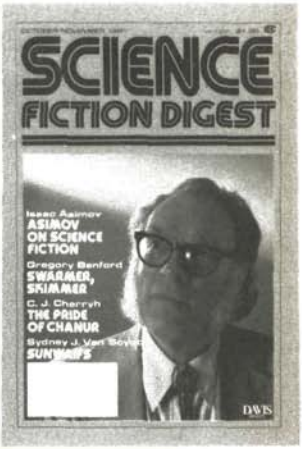

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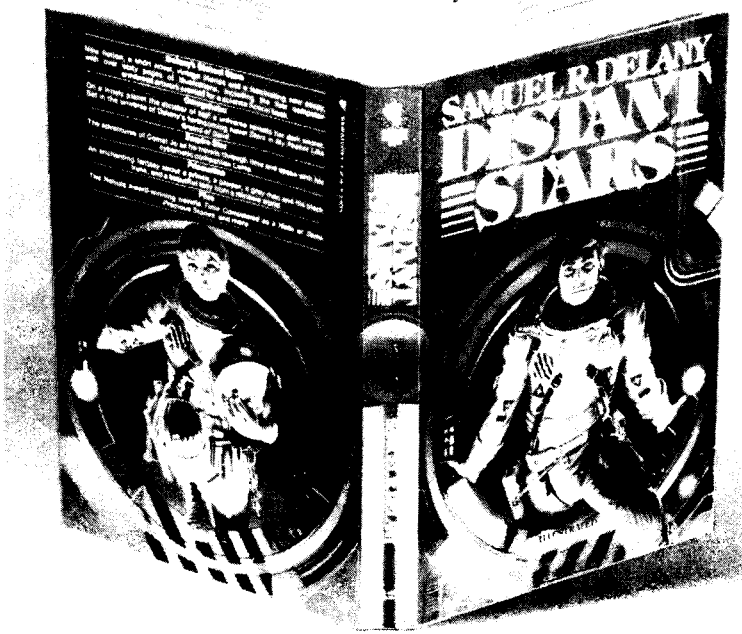

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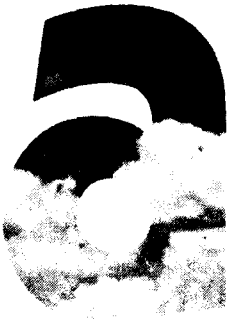

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Editorial

Stanley Schmidt

A CASE FOR CONFORMITY

A case for conformity?

Time was when that phrase would have raised my hackles (and if I heard somebody else say it, it would still be good for at least an eyebrow or two). Growing up in the fifties and early sixties, I found myself in a social environment which placed perhaps even more emphasis than most on conformity for conformity's sake. Nearly all boys of my age had crewcuts or flattops; girls wore skirts whose hemlines now serve as accurate calendars for dating pictures taken then. It would be remarkable indeed if all these people independently concluded on rational grounds that these hair and clothing styles were the best they could possibly wear, and I don't for a moment believe that's what happened. Instead, these people were very concerned with doing things just like everybody else, lest they be ridiculed—and most of them helped maintain the situation by dutifully participating in the ridicule of the few who failed to follow the fashions. How such a feedback system gets established is an intriguing question in itself (which I don't propose to answer now), but the propensity for it seems to be easily aroused and to pervade all areas of life. My contemporaries in high school were also terribly concerned about liking the right music (and keeping quiet if they really liked the wrong kind), going to the right dances, and dating at the right age (whether they had anybody they really *wanted* to date or not). Their parents played the same games with different pieces: living in the right neighborhood, driving the right cars, playing golf at the right clubs. School and company psychologists aided and abetted the whole process with pious preachments about the psychological values of Belonging and being Well-Adjusted.

Needless to say, I (like many people who were attracted to science fiction) did not fit very well into this atmosphere. I could never see much merit in being like everybody else, or in pro-

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fessing a set of likes and dislikes that were not really mine. I reacted against the pressures by taking pride in being a *non*conformist, doing things for reasons based on my own real wants plus logic—which often meant things quite different from the current fads. I delighted in irritating my acquaintances by asking them *why* they did the things they did, and watching them grope for answers. I hung on the words of the few heretics who dared suggest in public that Belonging and being Well-Adjusted were not all they were cracked up to be.

In the late sixties and early seventies, a funny thing happened: nonconformity became fashionable. It sounds like a contradiction in terms, and to some extent it was. A good many of those defying the "Establishment" by conspicuously abandoning its uniforms and rituals were just as conspicuously adopting a new set. A good many, not surprisingly, were not really ready to develop their *own* philosophies and values—*regardless* of what others thought—but merely shifted their focus. Instead of doing things to be *like* the Establishment, they deliberately strove to be *different* from it (and soon fell into imitating each other, being different in the same ways). In so doing, their lives were shaped by their surroundings as surely as if they had been trying diligently to conform in the slightly older sense.

But not *all* fit this mold. The fact that long hair and denims became a uniform for "mutually conforming nonconformists" tends to hide the fact that something significant really *did* happen in the late sixties and early seventies. Sure, some of the wearers of long hair were just following a fad, with no more imagination than their crewcut predecessors—but I encountered more *real* nonconformists then than ever before or since. Many who ostentatiously disowned one set of fashions quickly established another, but meanwhile the "nonconformity fad" did create a new tolerance toward actual independent thinking. Not everyone could (or wanted to) do any, but those who were willing to try could now do so without expecting nearly unanimous ridicule—and some did.

In ways, I miss that. I don't think the social climate has gone back quite to that of the fifties, but I could see the pendulum starting back that way even before I left my college position three years ago. Of course, for us "real nonconformists" it will make little difference. We will simply go on "doing our own things" just as we did before that became fashionable—but probably, in many cases, with at least one subtle change.

It seems to me that many people who admit to themselves that their interests do not coincide with those of the herd tend to go first through a "declaration of independence" phase. Defensive and perhaps a bit unsure, they speak loudly and often of their nonconformity. To prove the claim is not just words, they go out of their way to act unconventionally, doing things precisely *because* they are unorthodox.

Later, with growing maturity and confidence, they may come to realize that he who does things to be different is being socially molded as surely as if

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he did things to conform. Such a person might better be called an "anticonformist" than a "nonconformist." If he was bicycling at a time when adults who rode bikes were laughed at, he might be tempted to quit when bicycling became a fad. If he then recognized that "inverse pressure" for what it was, and that he really *liked* to ride a bike, he might move on from being an "anticonformist" to a higher level of personal freedom: what I have called a "real nonconformist." Now he would simply not *care* whether anyone else was riding bikes. When the fad came, he would continue riding as before, unperturbed by the fact that he now appeared to be blending into the crowd. And unless his tastes changed, he would still be riding when the fad passed. He would recognize that, in general, there is little intrinsic value in being *either* conventional or unconventional, *per se*.

And a little later than that, he might recognize that in some *special* cases, there *is* intrinsic value in one or the other. An occasional jolt of unorthodoxy is desirable to remind people that it's possible and to keep them from becoming excessively unanimous and stodgy. Nonconformists, after all, are essential to human progress. Significant innovations, by definition, are not made by those who adhere tenaciously to old ways. Even fads are not started by those who follow them. Society needs reminders that there can be more than one way of doing things, lest it become unduly fearful and intolerant of innovation.

But there are cases where *conformity* has intrinsic value, too. I still dislike and distrust attempts to enforce it where is no truly compelling need—for example, I have seldom, if ever, been convinced that dress codes were justified. But there are some situations in which there *is* a compelling need for conformity. A good example is communication—language and the related arts.

It's probably safe to say that no two human beings speak exactly the same language, yet the purpose of language is to transfer information from one mind to another. This requires that Mind A, with an idea to share, must translate that idea into a linguistic structure which Mind B can translate back into an idea closely approximating the original. Unless the idea is extremely simple, it will seldom if ever be *exactly* the same, but successful communication requires that the correspondence be as close as possible. To this end, most residents of a region usually share a language—actually, a group of very similar languages, one for each individual—which they use as a medium of exchange for information. For the information to survive transmission and reception reasonably intact, each individual must try to make sure that his personal language is as close as possible to the common currency.

In other words, language is very much "a case for conformity." It is a case where there *is* intrinsic value in each individual's trying to do things—specifically, use words, punctuation, and other linguistic devices —exactly as everyone else does.

In many—perhaps most—cultures, this is not something enforced by legislative decree and judicial follow-up.

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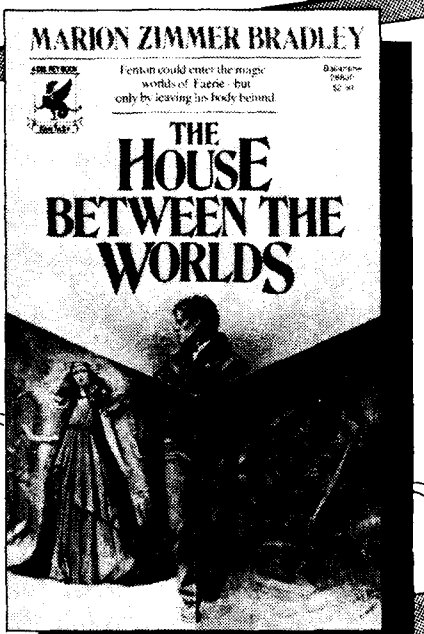
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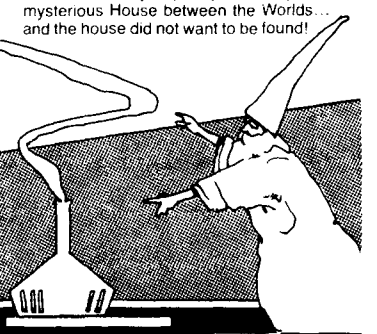
Fenton had to return to save the Faerie Queen—and his own world—from the ironfolk. His only hope lay in finding the mysterious House between the Worlds... and the house did not want to be found!



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But written languages, at least, normally have rules of word usage and grammar, and often schools which try to teach a common understanding of those rules. Often a government will try to insure that, even if a culture contains many subcultures with their own internal languages, there is *one* language which can be used as a common medium by all. When individuals from different linguistic regions must communicate, there may be special agreements for all involved to use a single language. Pilots and control towers, for example, use English at airports throughout the world.

Now we find a variety of efforts in progress to encourage "freedom and diversity" in language—an area in which these noble-sounding concepts seem, on close inspection, largely inappropriate. Certainly there must be room for evolution—the introduction *and dissemination* of new words and new shades of meaning for old ones, for example—but wholesale disregard of mechanisms designed to insure a common medium for ideas can only be counterproductive. We find students and would-be writers wanting to be free of "those silly rules" of punctuation and usage—and teachers all too willing to overlook "minor" infractions and encourage "freedom of expression" in form as well as content. But the expression of ideas often involves fine and subtle details, and conveying those requires close attention to the corresponding details in the medium of expression—by *both* writer and reader (or speaker and listener). G. Harry Stine recently wrote an "Alternate View" called "Communication Barrier," about misunderstandings he had noticed in reader responses to earlier columns. A few readers responded to that by viewing it as the temperamental grumblings of a writer who resented not having his brainchild understood—but, believe me, it's much more than that. "Don't blame us," some said. "It's the writer's responsibility to make sure he's understood. If he fails, he has no one to blame but himself."

Sorry, folks—dead wrong. *Half* the responsibility is his, to say as clearly and precisely as possible what he means. But the reader has an equal responsibility to read exactly what the writer wrote, and that means agreeing on a set of rules and paying close attention to how they were applied. *Details count.* In the expression of a complex idea, the presence or absence of a comma can make an enormous difference in meaning—but it does no good for the author to take pains to put it in if the reader doesn't bother to notice that it's there.

In Canada there has been recent controversy over French-speaking pilots wanting to be allowed to speak French to control towers. As both a pilot and a passenger, I'm firmly against this—unless French *replaces* English at airports throughout the world. I don't care *what* language is the international language of aviation—I'm perfectly willing to learn enough Urdu or Abkhaz to communicate with a tower, if I must—but it's very important that there be one. Air traffic control is no place for displays of ethnic temperament. Towers whose sole purpose is to prevent death and destruction resulting from confusion should not be named Babel.

And now we have ongoing contro-

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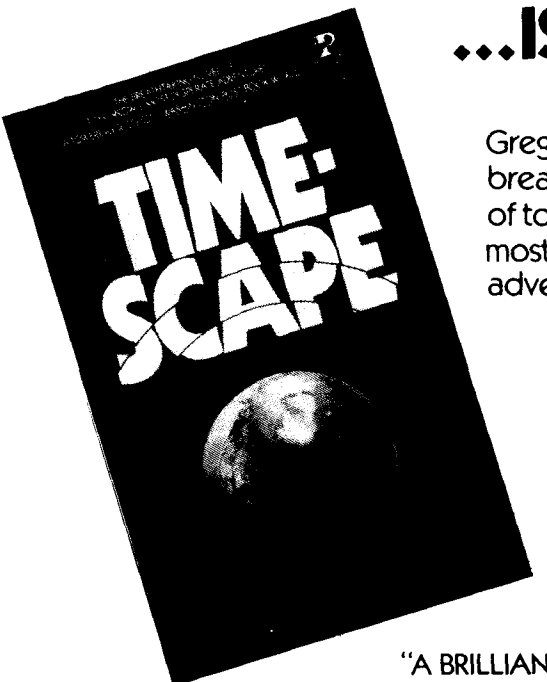

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versy in this country over bilingual education. The idea, basically, is that children of immigrant families have a "right" to receive education in their native languages. In theory, this education will not be a substitute for learning English, but a supplement done in parallel with the student's early instruction in English, so he will not fall behind in other subjects while getting ready to join normal classes in them. In practice such programs have tended to continue for suspiciously many years, with suspiciously disappointing results.

Completely aside from the costs of providing such special instruction, and the question of whether chemistry teachers chosen more for their knowledge of Aleut than for their knowledge of chemistry are truly qualified, do such programs really help the people they are supposed to help? There is evidence that often they do not. An oft-repeated observation in the operation of such programs is that the parallel-language instruction continues year after year and the students never become really fluent in English. A likely reason is not hard to find. Why *should* they learn English well when the curriculum encourages them every day to believe they don't need it? When their other courses are taught (at least perfunctorily) in their own languages, and relatively little attention is given to English, English quite naturally seems more like a peripheral annoyance than a vitally needed tool whose use is being conscientiously taught. It would seem that, in the long run, the time and money going into these programs may be more crippling than enabling, and might be better (and more economically) devoted to an intensive introduction to English designed to get these students as rapidly as possible into standard courses in other subject matter—with the clear understanding that English is what they will have to use thereafter.

I must emphasize two points. I am *not* advocating the eradication of the native languages of ethnic subcultures; I've done too many translations myself to believe that a cultural heritage can be preserved independently of its language, and I do believe cultural heri-

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tages are worth preserving. Willa Cather once complained, "Our lawmakers have a rooted conviction that a boy can be a better American if he speaks only one language than if he speaks two." I fully agree with her sentiment—but in bilingual education as presently practiced, the actual result is that the boy speaks not two languages, but two halves. He knows one language, but relatively little to talk about in it, and only half-knows the other language itself. This is doing him no favors. The ideal of real bilingualism among immigrants to this country would be better served by encouraging them to maintain their own language and culture among themselves, and meanwhile intensively helping them to acquire English. Then they could function well not only as part of their own subculture, but as part of the larger culture which they have joined. We're all in this together, and large numbers of people who cannot participate in the culture at large tend to hinder both it and themselves.

And I am *not* being an English-language chauvinist in making these remarks. I suggest that immigrants to this country should be helped and urged to learn English not because it is English, but because it happens to be the common linguistic currency in the culture already operating in this part of the world. I would make the corresponding suggestion in regard to any immigrant into any culture. If I moved to Finland or to Epsilon Eridani IV, I would consider it my duty to learn—and help my children learn—Finnish (or the appropriate Eridanian dialect). I would not have the nerve to suggest that the Finns or the Eridanians owed *us* any instruction at all in English.

Ultimately, it is a question of adaptation. Any organism must adapt to the environment in which it finds itself—or take the consequences. The "environment" includes other organisms—even people. The organism which waits for the environment to adapt to it is, at best, playing a long shot. It would do far better to take the problem into its own hands and adapt *itself*.

"Adapt" does not not necessarily mean "conform." Some organisms create new niches for themselves, and in the ultimate test applied by nature, all that counts is that the adaptation *work*. But in the special case of language, conforming—learning to use a language as close as possible to that prevalent in the environment—seems the most likely road to success. ■

● As a practical means of instituting interstellar dialogue, neither radio signals nor interstellar spacecraft is appropriate, and we must instead concentrate on the receipt of monologues from elsewhere. The primary approach quite properly is the search for radio messages transmitted in our direction by more advanced civilizations. But it is hard to resist sending out something ourselves.

CARL SAGAN

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Michael McCollum

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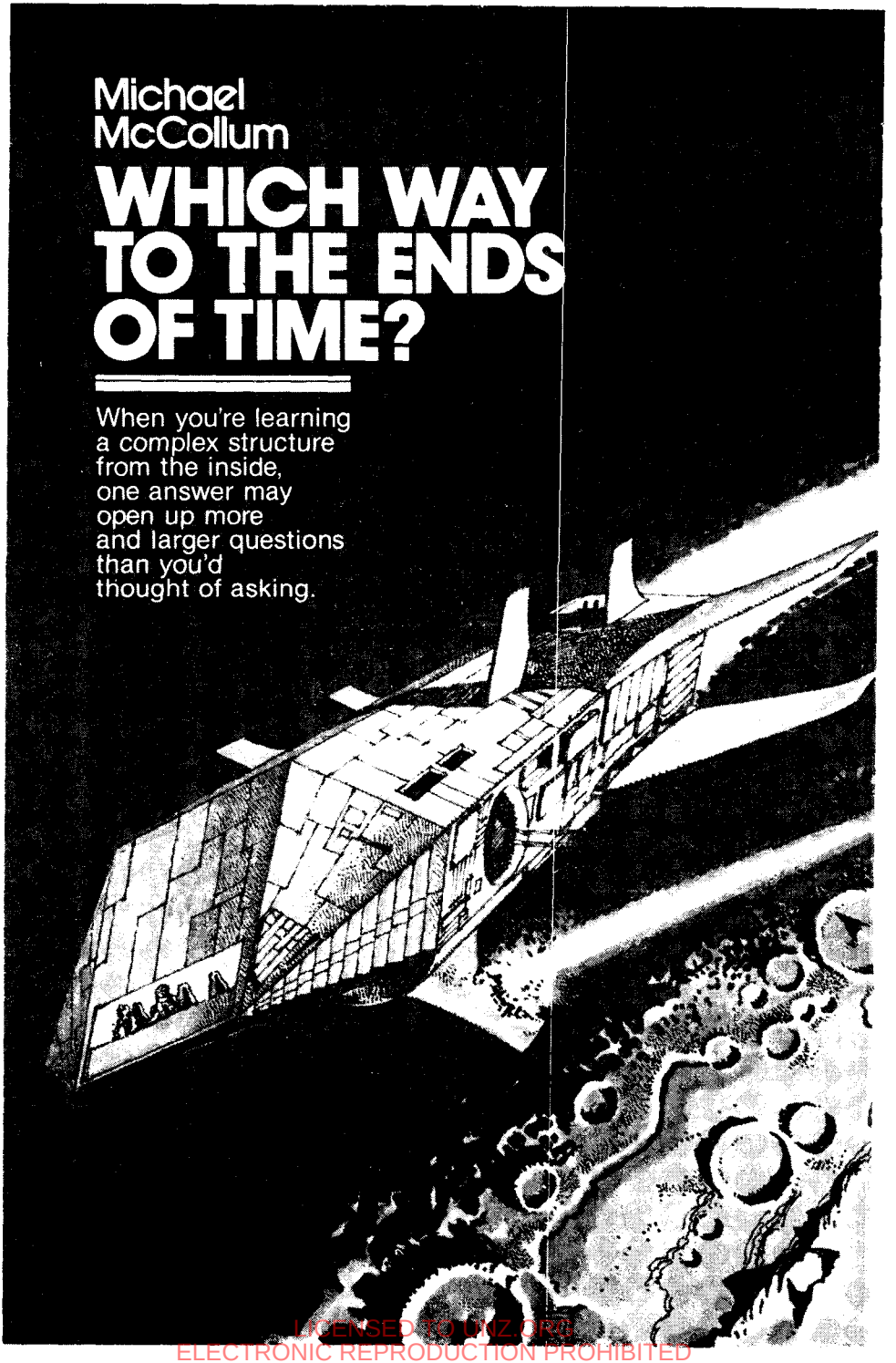
When you're learning a complex structure from the inside, one answer may open up more and larger questions than you'd thought of asking.



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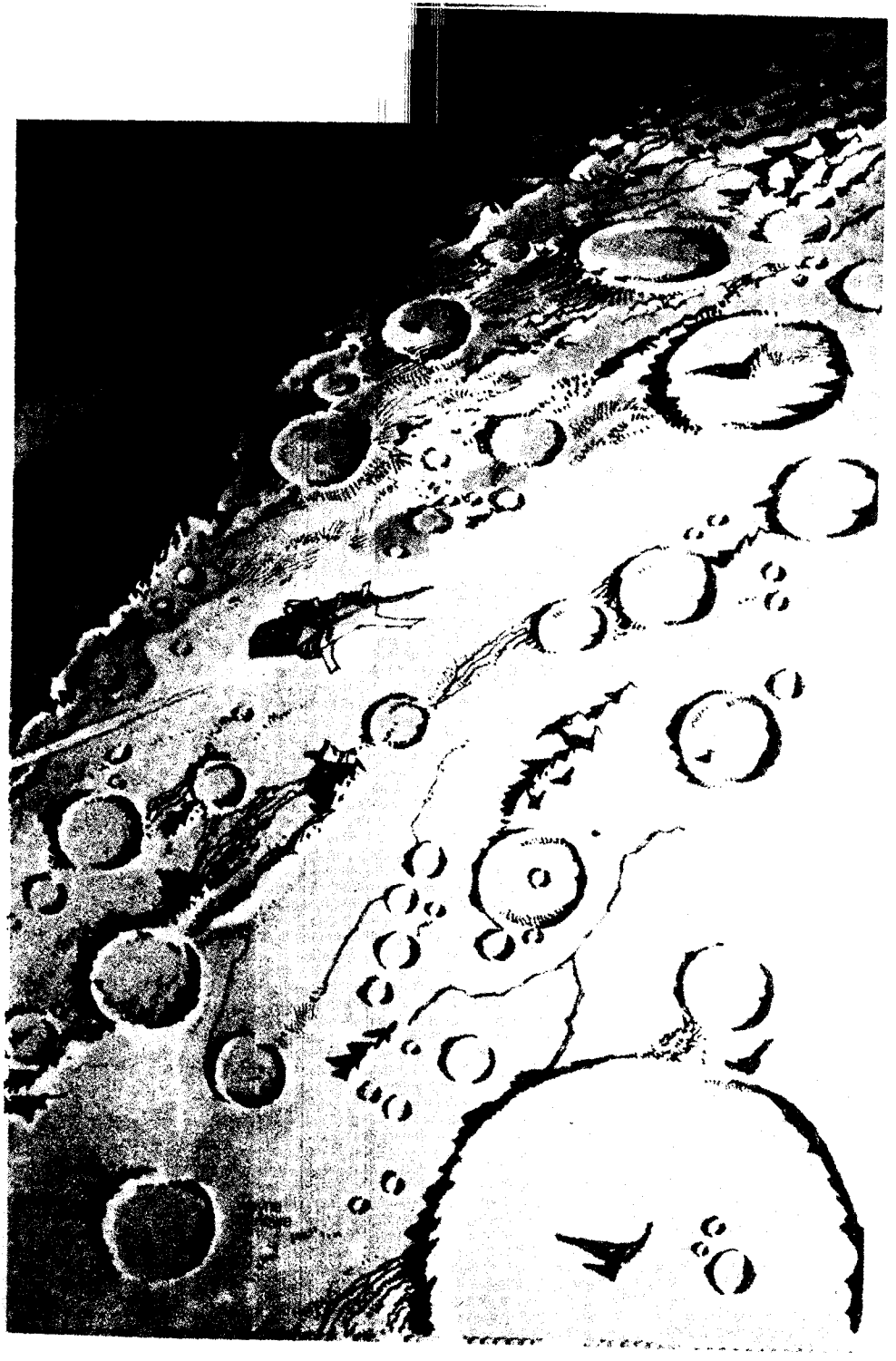

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1

The earth hovered low in an ebon sky, its white storm systems and azure oceans glittering in the sun. To the naked eye, this Earth was identical to two dozen others across paratime. It could easily have been Talador's Earth, or Gestetni's Earth, or even Dalgir's Earth, for that matter.

But if my eyes could discern no difference, my heart had no such trouble. For this was *the* Earth, as far as I was concerned.

I was home.

I was also homesick. Homesick, hot, sweaty, smelly, minus on my sleep, chafed by the lunar dust that gets into everything, and generally perturbed about the way my life had been going lately.

I had joined the Taladoran Time Watch to fight Dalgiri. Instead, I found myself shuttling from one construction job to another, giving advice on the best way to perform heavy construction in vacuum. All I know about heavy construction is that I once rode a motorcycle across the Golden Gate Bridge. As for vacuum—well, I used to read *Aviation Week* now and again. In the time-honored tradition of all military organizations everywhere, my bosses had assigned me to a job where I was about as useful as a fifth wheel on a tricycle.

And I had no one to blame but myself.

In retrospect, all my troubles could be traced to a single event: the expedition to the Fyalsorn Timeline two years ago. Dal Corst, Haret Ryland, and I came back from that little adventure and reported the Dalgiri Empire had discovered a new toy—the teleportation generator. With it they had spread out into space, discovering that the Moon has almost as many gateways between universes on it as the Earth. The Taladorans, who had ignored everything beyond the atmosphere for millennia, abruptly discovered themselves faced with a thousand unguarded back doors into their timelines.

Suddenly it was October 1957 again and the Russians had just launched Sputnik. The Taladoran Ruling Council immediately threw all the resources of the Confederation into a panicky program to build Lunar fortifications. And, being the closest thing to a space expert the Taladorans had, I quickly found myself dragooned into the effort with the other "vital resources."

Which was why I spent an average of twelve hours every day on the Lunar surface in a smelly vacsuit either being broiled by a too-hot sun or struggling to keep my toes from frostbite. In either case the misery was compounded by not being able to scratch where it itched.

I stewed about my problems as I slowly parbroiled under a blazing sun undimmed by atmosphere and watched as a half-dozen Taladoran technicians struggled to complete the power hookups for the great fixed beamers that were our sole means of defense. The place was Anaxagoras Crater in the northern Lunar highlands on my home timeline of Europo-American. The fixed beamers were a hundred kilometers away, on the other side of the Lunar pole from us. That was where the single Europo-American Lunar portal lay, and a spot we had to defend at all costs. Should a Dalgiri shuttle stumble across this timeline before Anaxagoras Base was ready. . . .

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"Watchman Duncan MacElroy is requested to report to the base commander. Duncan MacElroy, report to the base commander immediately!" The command erupted from my earphones and bounced around the hollow confines of my helmet. Normally I would have welcomed the opportunity to get out of my vacsuit, but not this time. A few hours of misery was nothing compared to a summons from Garsich Mersaich, the Watchman in charge of making sure that Anaxagoras Base got built soonest.

When you got called up before Garsich, you were sure of one thing. You weren't about to be kissed on both cheeks.

"Watchman MacElroy, reporting as ordered."

The grizzled old warrior was hunched over his desk-cum-computer terminal. He grunted his acknowledgement of my presence.

"What do you know about this satellite your people are lofting next Tenday, MacElroy?"

I hesitated as I changed mental gears. Then I remembered. When the Taladorans had first arrived on Europo-American's Moon, they found two lunar mappers in orbit—one American, one Russian. Both had been put out of action to keep them from transmitting pictures of our little construction project back to the men on the ground. The Russians had won the race to get a replacement up and were even now preparing a launch vehicle.

"They're not *my people*. They're Russians," I said, truculently.

"Fellow timeliners, then."

"Well. . . ." That was as far as I got as alarms began to clamor all over the place. The next thing I knew, Garsich had vaulted his desk and was gone. I turned to follow. I found him in the main fortress control room spewing out orders in a steady stream composed of at least fifty percent profanity.

I also found Jana Dougwaix in Combat Control. Jana had been the first Taladoran I met four years ago, and was responsible for my having joined the Time Watch in the first place.

Afterwards, she had returned to New York to continue her studies into the quaint customs of Europo-Americans. As soon as construction began on Anaxagoras Base, however, she had been drafted as the in-house expert on the local yokels.

"What's going on?" I asked.

"Intruder just came through the portal going like a bat out of hell," Jana said. "They're trying to track it now with inputs from the overhead satellites."

"Identified?"

She nodded, slipping into her Europo-American mannerisms with an ease that betrayed long hours of training. "Dalgiri, what else?"

I felt a cold chill run down my spine as I remembered the work party I had just left. We were defenseless without power to our beamers.

A dozen wall screens were alight with inputs from sensors guarding the time gate. All the screens flashed warning messages simultaneously and the alarms sounded again. I glanced up in time to see a second shuttle materialize in empty space.

"Dalgir moving off in the direction

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the other one took," the detector operator called out.

The new ship gathered speed and disappeared over the horizon. Less than a second later, a map of Lunar Farside flashed on the screens. The second shuttle's course was superimposed on the multicolored map as a glowing red line.

"Any sign of additional shuttles?" Garsich roared as he watched the movement of the Number Two target.

"None," the technician on duty called back.

"Something's wrong here," he said, almost to himself. "Any chance we've missed a portal?"

Schruelsin bis Harl-son, Garsich's deputy and the closest thing we had to a real temporal physicist, glanced up from his monitoring station in the center of the room. "Not a chance, Gar. We've got a detector satellite in a ball-of-string orbit not much higher than these peaks around us. There is only one area of low temporal potential on this whole damned orb, and we're sitting on it."

"Energy discharge, Commander." This from one of the detector technicians following the intruders. "Beamer fire by its spectrum."

"What, by the Square Gods of Lashua, is going on here?"

"First intruder spotted. . . . More beamer fire. . . . They're fighting each other!" The reports came fast and furious from around the outer circle of operating detector stations. On the screens we could see nothing but the craggy highlands of Farside and frequent flashes of lightning that overdrove the screen's light amplification circuits.

"Second intruder hit, but fighting back. Sensors detect atmospheric gas around its image. . . . Now the first has been hit, not as bad. Direct hit! Second shuttle has exploded."

The tech's running commentary was unnecessary, as we stood riveted to the deck and gaped at the strange sight on our screens. The two Dalgiri shuttles had just fought a slugging match near Mare Moscoviense, and the last through the portal had come up the loser. As we watched with our mouths hanging open, a searing point of light blossomed on the surface of the Moon an instant before the screen went blank.

"Our sensors were burned out by that last one," the tech reported.

"What about the remaining shuttle?" Garsich demanded.

"Indications are that it was damaged. The field scanners report loss of lift-and-drive just before our instruments overloaded. It could be down."

I turned to Jana, who had watched the drama unfold with the same open-mouthed wonder that I had. "Now what in hell was that all about?"

"Damned if I know," she said. "I'll bet that old Garsich doesn't wait long to find out, though."

"No bet."

2

No bet, indeed.

Within fifteen minutes we were down in the hangar bays slipping into our suits. I say we, because Jana and I had been assigned to operate a survey scooter in a sweep of Farside. The scooter was little more than a bench seat big enough for two and a lift-and-drive generator.

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It was bigger than a single man floater, but not much.

We were vectored—along with three other search teams—to the site of the explosion that had blinded our sensors. A single look was all it took to conclude that no one had survived that inferno. After satisfying ourselves that the slag-heap below had truly been a Dalgiri shuttle, we split up and began our sweep of the surrounding area.

We separated until each scooter was approximately fifty kilometers from its neighbors, and pivoted our rough line with the center of Mare Moscoviense as our anchor before beginning a slow traverse down from Tereshkova Crater toward the great splash mark that is Mendeleev. We carried portable detectors that would react to the presence of any paratime shuttle, even a disabled one—unless, of course, it happened to be in the same condition as the wreck we had just left.

We cruised slowly southward, the surface below us a sea of impact craters. We searched in silence, the only sound that of our breathing, until:

"Hey!"

"What?" I asked, suddenly sitting up straight and craning my neck for whatever it was Jana had spotted.

"I'm getting something on the detector," she said.

"The shuttle?"

"Could be. Veer left, over toward that largish crater on the horizon."

I steered the scooter toward the rocky prominence she referred to, reporting our contact to the others of our search party. We hugged the terrain . . . lunain? . . . while Jana interpreted the weak readout on the detector.

"There it is!" I yelled as we topped a crater wall. Lying before us inside a small crater was the Dalgiri shuttle. It had hit hard. The hull had cracked open, and interior light was streaming out through the break. If it hadn't been for that, it would have been nearly invisible in the semi-shadow where it lay.

After a cautious approach during which the other search parties converged on us, I lifted myself through the break in the hull and entered the shuttle. It was empty. There were signs of habitation but no bodies.

I had been exploring the interior for ten minutes when Jana called on the comlink and reported footprints in the dust outside. I hurriedly left the shuttle and joined her near where a long rille broached the crater wall and snaked off into deep shadow.

Sure enough, there were two sets of bootprints heading off up the narrow valley. We reported the trail to the others, switched on our flashlamps, and followed. Before we had gone many yards, it was clear that one of the survivors was injured. One set of prints tended to walk with a dragging step, while the other nearby marks grew alternately deeper and shallower. I was no Indian scout, but it looked to me as though the latter prints were made by someone supporting the injured man every few paces.

As we entered the rille, we moved out of the blinding brightness of direct sunlight into the shadow of the narrow cut. Both Jana and I paused to let our faceplate polarizers adjust to the new level of ambient light. While we waited for our pupils to adapt to the sudden dark, we fingered our drawn beamers

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and peered intently into the blackness ahead.

"What do you think?" I asked.

"I think we need more people."

"Want to call two of the scooters down from the rim?"

She turned to face me and shook her head in silence. Translation: *What's the sense in all of us getting killed?* We continued to walk farther into the lion's den, each step taking us closer to our wounded, armed, and probably dangerous quarry.

Suddenly Jana halted and swung her flashlamp to the right. I followed with my spot. Ahead of us the bootprints entered an angular split in the rock that was almost a cave.

"Well?" I asked.

"I guess we check it out," she said in a strained voice.

We crunched our way to the cave, each taking care to keep out of the line of fire of anyone inside. We turned off our comm units and put our helmets together for a hurried conference. After a brief argument, Jana agreed to do things my way and positioned herself to the side of the slit. On the count of three, she switched her flash to high beam and wide dispersal and pointed it into the cave, making sure to keep most of her body shielded behind the wall of rock. At the same instant I dove forward and through the entrance, landing on my belly with my beamer extended in what I hoped was authentic Wild-West style.

"Don't shoot!" I screamed.

Directly in front of me, not ten feet away, were two figures in Dalgiri spacesuits. But the people in them weren't Dalgiri. At least, the one whose face was turned outward toward the light was no pseudo-Neanderthal. I had seen dozens of Dalgiri, and not one had sported a pert button nose, soft red lips, or a beautiful heart-shaped face framed by cascades of jet-black hair.

3

I lay there in the dust of the cave with my heart beating in my ears for perhaps ten seconds. The woman stared at me with eyes narrowed to two slits to combat the glare as her lower lip quivered in fright. She cradled the other figure protectively in her arms. I tore my gaze from her lovely face and scanned for weapons. She was unarmed, as far as I could see.

I told Jana to cover me and got to my hands and knees, then my feet, holstering my beamer as I did so. The woman's eyes shifted to follow my movement. Her mouth opened and her lips moved in silent speech. I chinned my comm to the general channels.

". . . don't hurt us. Please don't hurt us." Echoed over and over in my earphones. The voice was a pleasant contralto made hard by its burden of panic.

The language was Dalgiri.

"Don't worry, you are safe with us," I responded in the same language. I walked forward, keeping my hands in plain sight until I could get a better look at the other figure. The man was of the same race and unconscious. A trickle of blood ran from the corner of his mouth, disappearing into a sparse, black beard.

The woman said something I didn't quite understand. The language was still that of the near men, but the words were

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burdened by an accent I didn't recognize.

I reached out to pat her on the shoulder through the heavy material of her suit, hoping that it was as much a gesture of reassurance on her timeline as it was on mine.

"We won't hurt you," I said again in Dalgiri, forming the words slowly and carefully so there would be no misunderstanding.

She smiled, revealing a set of perfectly formed pearl-white teeth that contrasted sharply with her skin and hair.

"Thank you," she said simply.

"What is your name?"

"Felira Transtas of Clan Rossa."

"Glad to know you, Felira. I am Duncan MacElroy. Who is this?" This time I gestured to the man.

"My brother, Graf Transtas. He was injured during our fight with the *Vecka*. Please help him!"

I had no idea what *Vecka* meant, but the inflection she gave it told me it wasn't something you usually heard at a testimonial dinner.

"Everything all right in there?" Jana called out from the cave mouth.

"Everything's fine. Call a shuttle."

She did so before holstering her beamer and coming inside. Between us we got the injured man to his feet and I hoisted him over my shoulder in a fireman's carry—not easy to do in a vacsuit, even if the victim weighs only fifty pounds or so. I hoped that I hadn't injured him further with such treatment, but we had to get him back to the crater floor where a shuttle could put down.

Three scooters descended from the guard positions they had taken on the crater rim. Among the other searchers was the base medical officer, Zela Bar from the Varnoth timeline. He bent over the injured man, observing his condition through his faceplate.

"Shock," he said gruffly as he straightened up. "Probably bleeding internally. That shuttle had better get here fast if we're going to save him. I don't recognize the cast of his features. They must be of a breed we haven't encountered before."

"They're human, aren't they?"

"Don't be silly. Compared to the other deviations from Taladoran norms . . . your own people, for instance . . . these two are as human as any of us."

An hour later—four bora as the Watch measures the passage of linear time—a rescue shuttle homed to a landing beside the ruined Dalgiri vessel. While Zela Bar supervised the loading of the wounded man, I explained to the girl that she would be accompanying the doctor and her brother.

"Are you not coming too, Duncan?"

"I have to stay here and help the others," I said. "Go on, you'll be all right."

In a matter of seconds she was up the ramp, and the cargo carrier was rising on its lift-and-drives and heading north.

"She's beautiful, isn't she?" a voice said in my earphones. I turned to see Jana standing a dozen feet from me, a cryptic expression on her face.

"Who?" I asked.

Jana chuckled. "Who indeed? Our little castaway, of course."

"Yes," I agreed, nodding. "She is that."

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4

Flight time back to Anaxagoras Base was the same two hours as the trip out. By the time we sighted the big crater on the horizon, I was more than ready to doff the smelly balloon I wore and indulge in an orgy of scratching. There was one place right in the small of my back. . . .

Our four scooters broke formation and lined up single file for landing as a huge section of cliff face swung open and soft blue lighting spilled out onto the black-grey-brown lunar surface.

Jana and I were number three to land. We barely waited for the scooter to slide to a halt before we were out of our saddles and racing for the airlock. Once inside, we took turns undogging each other's pressure seals, making it a contest to see who could get free first. Anyone who has waxed lyrical about the wonders of space travel has never spent a full day cooped up with themselves in a vacsuit.

"Argghh," I said as Jana helped me lift the torso piece of my suit over my head, and I nearly dislocated a shoulder blade trying to reach the small of my back.

"Here, let me help you," she said, slipping her soft hands under mine. "About there?"

"A little higher . . . now to the right . . . down . . . that's it."

There are few joys in this world quite so basic as getting a persistent itch scratched. After I could think clearly again, I returned the favor, my hands roaming playfully over Jana's body. We stood for ten seconds in blissful unawareness of our surroundings, our arms entwined and our hands busy. The moment was quickly ended by the blare of a wall-mounted annunciator over our heads.

"Watchman MacElroy, report to the base commander's office, immediately!"

"Damn," I said in English, since I find cursing in Taladoran lacks emotional involvement. "What now?" Since there was no obvious answer to that question, I hurried through the great empty bays that would someday hold dormitories and living quarters, but which for now were merely huge echoing caves. In less than five minutes I was once again in the small office where I had been . . . just this morning? It seemed more like last year.

"Watchman MacElroy reporting as requested, sir!"

"Good of you to come so quickly, MacElroy," Garsich said, looking up from a message flimsy on his desk. "Less than a bora ago I received a communication about you from headquarters. It says, and I quote: 'The subject Watchman is to be relieved of his duties with your command and is hereby ordered to report to Watch Commander Dal Corst's staff for the purposes of planning a major effort against the Dalgiri.' Know anything about this?"

I nodded. "Dal must have gotten the go-ahead for his expedition into the Empire to trace the source of the teleportation generator."

Garsich smiled, one of the few times I'd ever seen him do so. "Well, I wish you luck. I only wish I were going with you instead of sitting in this Threla-cursed hole bossing a bunch of independent-minded techs. Your transpor-

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tation priority is routine, I'm afraid, so you will have to wait for the regular supply transport in ten days."

"What about the special shuttle that will be taking the two outtimers to Talador?"

"Gone. Zela Bar felt the injured man needed first-rate medical facilities as soon as he could get them."

I shrugged, then translated the gesture into the Taladoran equivalent. "I guess it's the milkrun then. By your leave, sir." I turned to go.

"One more thing, MacElroy," Garsich said. "Since you will be around until the next transport anyway, you might as well do something useful."

"Such as?"

"That pesky sky spy your people are lofting is still on schedule, and we've got two paratemporal craft wrecked on the back side of this airless piece of worthless rock. It would never do to have them scanned, now would it? I am assigning you to the work party that will clean up that mess. Report to Assistant Pilot Belraem in Airlock A-3."

I turned once more to go, then stopped, turning back to face Garsich. "Does this mean I will be working outside in a vacsuit?"

The old warrior looked up from his work screen, his face once again a disciplined study in dourness. "You will be working outside. Whether or not you wear a suit is up to you. Dismissed."

5

Jafta Port is the major terminal serving the capital city of the Confederation. As such, it has an ambience recognizable to anyone who has ever sailed into a major deep-water harbor or changed planes at an international hub airport. It reminded me of what JFK in New York will probably look like in a thousand years—only bigger.

Dal Corst was waiting inside the passenger terminal after I disembarked from the supply shuttle.

"Welcome back," he said, clapping me on the back. "Enjoy your vacation at home?"

"Ever spent three days straight in a vacsuit?" I asked.

Dal chuckled. "I thought you wanted to be a spaceman."

I made the expected rude noise in answer to his comment. "Hey, what's this *Watch Commander* Corst business?"

"I've been promoted."

"Congratulations."

"Nothing any other strong-hearted, weak-minded Taladoran boy couldn't have done. Where's your baggage?"

"Damned if I know. They said it had to go through quarantine and that I could pick it up in the terminal."

It took nearly half an hour to get clear of the organized chaos of the port. Eventually Dal led me to an official Confederation aircar parked in a VIP spot.

"Duncan MacElroy, I'd like you to meet my second-in-command, Hral Ssaroth," Dal said.

Dal's deputy, who had been standing with his back to us as we approached, turned and I grabbed for the beamer I luckily wasn't wearing. Hral Ssaroth was in the grey uniform of the Taladoran Time Watch, but his features were those of a Dalgir!

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Ssaroth noticed my jumpiness and smiled, turning his craggy features into a miniature lunar landscape. Dal guffawed behind me.

"Maybe I should have warned you. Hral is recently returned from the Empire, where he did a bit of spying for us. He's from the Aazmoran timeline."

I grinned and pressed my fists against Ssaroth's. I felt more than a little stupid at my reaction. Even though Talador's chief opponents are of that branch of humanity known as Neanderthal on my home timeline, that did not disqualify others of their kind from Confederation membership. There were currently three Neanderthal universes in the Confederation. Aazmoran was the most advanced. I had gone to the Academy with a number of Aazmoranians, and they had been cultured and pleasant people all.

"I apologize, Hral Ssaroth, for my reaction. Dal may have told you I am an outtimer by birth. I'm afraid I still have a number of quaint customs to unlearn—picking my nose, jumping to conclusions, things like that."

Ssaroth laughed. "I understand, Watchman. It is something that my people have to live with for having the Dalgiri as distant relatives. No offense taken."

Ssaroth took the aircar controls while Dal and I climbed into the closed compartment behind him. We were soon high above the sprawl of Jafta megalopolis. There was a quizzical look on Dal's face as he regarded me with those violet eyes of his.

"Duncan, old friend, sometimes you give me pause, you know that?"

"Huh?"

"I have spent every waking hour for the last year and a half getting ready for our expedition into Dalgiri time. It has been hard, tough work, but I have finally begun to pull things together. So what happens? You go out for a stroll and the solution to the problem is dropped right in your lap."

"I don't understand."

"You remember a certain young woman of unknown origin you met on your Moon ten days ago? She just happens to be a member of the race that invented the teleportation generator."

"You mean Felira?"

"Yes, I mean Felira. How do you do it? How do you always end up in the right place at the right time?"

I shrugged. "Just lucky, I guess. How's her brother?"

Dal sighed. "I'm afraid he didn't make it. The medical report says massive internal injuries."

"Too bad. It must have hit her hard."

"It hit me worse. Those damned medics had her sedated for nearly half a tenday. I didn't even learn of her existence until three days ago."

"So what's the scoop?" I asked, suddenly happy at the prospect of seeing Felira again.

"Patience, all will be explained in due time. I've set up a briefing for you, as I am a little busy right now. Your Felira has burned holes in my plans, and I'm right in the middle of reformulating them."

"She's not *my* Felira," I said.

Dal got the cryptic look on his face that means he knows something I don't and is enjoying himself too much to let me in on the secret.

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"That's what you think," he said, chuckling.

The conference room was empty save for Dal Corst, myself, and a short, dumpy woman with a splotchy red face and a complex pattern of furrows cut in her hair. She had been introduced to me as Soufilcar Jouniel, the staff correlationist who was interrogating Felira Transtas.

"Fil will brief you, Duncan. I've got to run," Dal said. "Too many damned details to wrap up around this place."

With that he was gone. I turned to the woman. "Ready when you are, Academician."

Jouniel pressed a contact on the lectern before her and the lights dimmed. A holoscreen lit up to show a lifesize still of Felira's face. She was either drugged or sleeping peacefully.

"Watch Commander Corst thought it best that you view the pertinent parts of our interview with the subject, Watchman. Because of the trauma associated with the loss of her sibling, the subject was under narcoquiz most of the time." With that she punched another stud on the lectern and the face in the cube came to life. Off camera, Jouniel's voice asked Felira her name.

"Felira Rossif Bax Adelphia Transtas, Second Daughter of Grafftar Bax Transtas, Hereditary Law Giver of Transtas Sept, Clan Rossa." Her eyes remained closed, but her voice was strong and clear.

Jouniel punched a control and the scene froze again. "Note the ritualistic genealogy and stress on family, Watchman. This is a modified clan society with strong family relationships." She set the cube record in motion once again.

It was a new scene. Felira lay on the same padded table with Jouniel somewhere out of camera range. The difference was that the camera angle had widened to show Felira's bare shoulders down to the upward swell of her breasts. The shot wasn't particularly revealing, no more so than hundreds of perfume and hair spray commercials I'd seen in magazines back home. In spite of that, my heart beat faster of its own volition.

Jouniel asked about the Vecka, and Felira stirred in her sleep. Her voice, when it finally came, had a curious quality and it quickly became evident that what we were hearing was an epic saga of her people's history.

Once (so the saga began) the Syllsintaag had been a proud and mighty race, the masters of their world. They had conquered their planet and had begun to gaze up at the stars with a sense of longing.

Then the Vecka had come from nowhere in huge ships to raid and plunder. That had been three hundred years ago. Their takings included machinery, fissiles, and people. And when the ships were bloated with booty, they had risen into the blue sky to vanish once more.

The black ships came every seventh year for the next century. Each time they were more numerous and powerful. Each time more cities were plundered and ever larger numbers of Syllsintaag were taken captive. Between raids those left behind could do nothing but repair the damage and prepare their defenses.

Then, for a period of seventy-five years, the raids stopped and civilization began to build itself anew. A Golden

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Age spread across Syllsin. People began to forget the nightmare they had been through. They grew fat and happy until one day the biggest horde of all reappeared in their skies. This time it was no raid.

In the end, the Vecka ruled Syllsin with an iron hand.

Jouniel stopped the projector and turned to me. "Of course, you understand that what we are hearing is not an objective history by any stretch of the imagination. It is an heroic saga painted in stark white and black, with no effort at moderation. But the backbone of the story, that of the Veck-Syllsin struggle, must be relatively accurate. Does the pattern of the raids remind you of anything, Watchman?"

I nodded. "I'd say a skewline couplet with intermittent portals."

Jouniel smiled. "Dal was right. You are a bright one."

6

The usual way to think of alternate universes is to consider them to be either parallel (like the pages of a book), or diverging (like the branches of a tree). They are neither. The lines weave, and bob, and mesh with maddening irregularity. And where they touch, there sometimes appears a region where the energy barriers thin to form a time gate; a portal through which the ships of paratime may pass on their journeys cross-time.

Not that the maelstrom is totally without form. There are whole clusters of universes that are the paratime analog of a galaxy; regions where dozens, or hundreds, or even thousands of lines transit five-space in more or less the same direction. These are the interdependent timeline clusters, where temporal portals are stable and long-lasting affairs. Such clusters usually are the cradles of the great Paratime Civilizations.

There is another class of alternate universe, however. This one wanders aimlessly through paratime, touching other lines not at all or only briefly before heading off on a tangent once more. The name given to such a universe is "skewed timeline," or *skewline*.

My home universe—Europo-American—is such a timeline. Apparently, Felira's was too, with one critical difference. Felira's universe wandered paratime in the company of another. The gate between the two lines was an erratic one, only opening for a few days or weeks each decade. Then, as such gates are liable to do, it had closed for four generations, to reopen permanently as the swirling pattern of entropic energy stabilized for an eyeblink of geologic time.

While the portal was intermittent, the Vecka had to content themselves with brief raids for raw materials and slaves. As soon as the gateway became reliable, however, they had moved in to stay.

The hologram began to move again.

"What of the teleportation generator?"

Felira stirred at Jouniel's question, obviously disturbed. "Graf . . . where is Graf?"

"Graf has gone away," Jouniel's voice said gently. "What of the teleportation generator?"

The teleportation generator, it turned

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out, was the result of a crash program to discover the secret of the black Veckan ships. More than one raider had been bested in battle, damaged, and captured. Yet the great engines remained inert masses of lifeless metal, no matter what the Syllsintaag scientists did to them.

"Not surprising," Jouniel said. "Without a portal to use, a temporal generator is so much useless junk."

But the scientists refused to believe their hard-won prizes did absolutely nothing. So they experimented until a luckless technologist succeeded in making a copy of a Veckan engine disappear. Rather than being transported from Syllsin to an alternate Earth, however, the generator teleported its hapless passenger to the Syllsin moon. Explosive decompression killed him instantly, but not before the automatic return had been activated. The evidence of his body was enough of a clue to show what had happened.

The record ended and the cube went blank. I turned to Jouniel. "So who are these Vecka and how did the Dalgiri get hooked up with them?"

Jouniel looked surprised, then sheepish. "Didn't I explain that? I guess I didn't. Sorry."

"Well?"

"Isn't it self-evident from the young woman's speech? The Vecka are a small band of refugee Dalgiri."

"Why refugees?"

"They were after slaves. Why? Machinery is more efficient. Yet their raids were primarily to obtain power generation equipment and worker breeding stock. That only makes sense if they were a small group cut off from the mother culture. Since our operatives in the Empire have never found any record of this offshoot civilization, the chances are good that they are intentionally hiding, possibly from Dalgir itself. We'll know more after we have solved a problem that has come up."

"Problem?"

"We've been forced to cease our efforts to question the girl for the time being. You saw how agitated she became when memories of her brother came to the surface. As a precaution I have stopped the interviews until a safer approach than narcoquiz can be worked out. The information she carries is far too valuable to risk damaging her needlessly."

I shuddered a bit at the thought of Felira fighting narcoquiz. There are other methods of extracting information from a human mind. Some of them leave the victim a drooling vegetable.

"You aren't going to do anything dangerous or painful to her, are you?"

Jouniel smiled. "That depends on how good a conversationalist you are."

"Me? What have I got to do with it?"

"Dal has taken the liberty of requesting that the young lady have dinner with you this evening. She has accepted. You will very gently work the conversation around to the information we must have to mount our expedition to her timeline."

"Why me?"

Jouniel didn't answer. Instead, a boomingly familiar voice echoed through the conference room from somewhere behind me: "Because, you lucky S.O.B., the girl seems to be in love with you!"

I turned to face Dal Corst, who was

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lounging just inside the door, a smile splitting his face from ear to ear.

"Not 'love'," Jouniel corrected. "More like an infatuation, or possibly just an emotional dependence."

"I don't get it," I said. "We were only together for a few bora, and all I did was try and keep her mind off her brother. Hell, we were in our vacsuits. It's hard to strike up a romance while covered from head to toe in three inches of rubber."

"It isn't very complicated, Watchman. The girl recently spent a number of days under extreme mental strain. She had prepared herself for death. When you found her, you offered her life instead. In such a situation the subconscious has trouble discerning between relief and romance, especially if the object of this relief is from a faraway land, and a member of the opposite sex.

"By now, she has inflated you to about ten times life size. You are her anchor to reality. You will have to be very careful about living up to that image."

I sat for a minute and thought about it. Somehow it still didn't seem reasonable. I cleared my throat and turned to Dal. "I see what you meant in the aircar. It does look like I have a fairy godmother, doesn't it?"

"Amen, brother."

7

I had my last case of blind-date nerves when I was eighteen and took the prettiest girl in my class to the high school prom. You know the feeling—clammy hands, dry mouth, the worry you are going to say something wrong and embarrass either the girl or yourself. Luckily, it's something that disappears with age . . . like pimples.

It does, huh?

If so, my mental state for the rest of the day was an omen that I was about to develop a terminal case of acne.

By the time I buzzed Felira's room in H.Q. Medical Center, I pretty well had the butterflies in my stomach under control. My first sight of her as the door hissed open was enough to grow a whole new crop.

She was dressed in an evening gown of the latest Jaftan style, a wisp of blue gauze that did little to conceal an athletic, rounded figure while allowing intermittent tantalizing glimpses of those few patches of flesh it did cover. Felira's eyes were done up in an unfamiliar flower pattern and her hair fell to her shoulders in a silky waterfall of midnight softness.

I decided I liked the effect in the span of time between two heartbeats.

"Hi, remember me?" was the extent of suave I could dredge up on the spur of the moment.

Her smile came up like a new sunrise at the same moment I got my first whiff of her perfume. I could feel my knees turn to rubber.

"How could I forget the hero who rescued me from certain death, Watchman?"

"I just wish I could have done more to help your brother. And it's 'Duncan', remember?"

"Both I and Clan Rossa thank you for what you tried to do . . . Duncan."

"You honor me."

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"The honor is mine."

"Are you hungry?"

"Famished," she said.

"Then we'll be off, milady. Our chariot awaits without."

"But I cannot!"

"Why not?"

Felira blushed, not easy to do with her complexion. "An unmarried woman of Syllsin does not appear in public clad so. I would shame my family and sept."

"Nonsense, that dress conforms to all local codes, ordinances, usages, traditions, mores, and customs. Besides, you are beautiful in it."

"The truth? No one will stare?"

"The truth," I said, taking her hands into mine. "As for staring, can you blame anyone for wanting to look upon such a vision?"

She smiled and seemed to put her embarrassment out of mind. "In that case, let us proceed," she said, fastening a matching cloak over the gown. "I'm so hungry I could eat a Veckan tax collector without salt."

"Good," I said. "I know a restaurant where Veckan tax collectors are the house specialty."

The restaurant was laid out to look like an open air garden in the mountains above Jafta. It was covered with a polarized dome that managed the seemingly impossible feat of showing off the carpet of city lights below without washing out the stars above. The dome interior was a jungle of fragrant plants, with each table set in its own small alcove. The place was arranged to give the illusion of privacy.

Felira was entranced.

After a while, she seemed to relax a bit. It was during my efforts at translating the menu that I heard her truly laugh for the first time.

"Here's a good one," I said. " 'A tantalizing repast consisting of boiled monkey eyes covered with a delicious sauce made from the raw entrails of overripe fish.' "

That was when she laughed. "Sounds delicious," she said.

I chuckled too, my own mood lightening considerably. It was as if an invisible wall between us had been lifted.

All through dinner we talked of our homes—me of what it was like to grow up in the U.S., she alternating with anecdotes of a childhood on Syllsin. I was a bit surprised that even with the Veckan jackboot on their necks, Syllsintaag children grew up happy and carefree. Of course, children have had that capacity since time immemorial, regardless of the indignities their elders manage to perpetrate on each other.

As the evening wore on and Felira became more relaxed, I gently nudged the conversation in the way Jouniel wanted it to go. Finally, the subject got around to the Vecka and I energized the sound recorder in my pocket, feeling an irrational pang of guilt as I did so.

"To tell the truth, I barely noticed the Vecka until I was fourteen," Felira said. "Up until then the War Masters were just a story mothers punished their children with . . . like the Cave Trolls or the Old Man of the Swamp. Oh, and once when my father took me to Rossa-Home on business, one of the Tithemasters passed us by on the Mall. I remember the smell of him even from nearly thirty *eppa* downwind."

"They don't station troops in your cities?" I asked, mildly surprised. I had

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been thinking Syllsin must be akin to what the Netherlands or Norway was like during the Nazi invasion.

"They wouldn't dare!" Felira said, fire returning briefly to her eyes. "We outnumber them a hundred to one and would overwhelm them. No, the Vecka rule by threat of mass destruction alone, and keep to themselves otherwise."

"Doesn't anyone ever revolt?"

"There was a revolt among the Fishermen of South Rana about twenty years ago. It is said that the ruins are still unsafe to enter."

"What happened when you were fourteen?" For a second I thought I had made a *faux pas* as her face clouded up.

"That was the year the press gangs took Graf for the technical schools on Veck. I never expected to see him again."

"Then how. . . ?"

"I was taken hostage. There had been trouble in our district and the governor demanded the sons and daughters of Clan leaders to ensure our good conduct. We were interned at Brolis Base, where I was put to work in the kitchens. It was there that I found Graf. He planned to steal a ship and escape to the wilderness. He had nearly completed his preparations when we found each other."

"What preparations?" I asked.

"Oh, many things. Like stealing a hypnodisk used to train pilots and implanting himself with the necessary skills. He had gotten friendly with some of the Veckan serfs—descendants of those captured in raids—who guarded us."

"How did you manage to steal the ship? I would think they guard their warships more closely than their gold."

Felira gave a humorless laugh. "We have a saying on Syllsin: 'The truth cannot be too many times spoken.' Normally we Syllsintaag are not allowed near the great ships. The crews are made up solely of Vecka and their serfs. We 'wild men' aren't to be trusted.

"No, our chance was the result of good fortune. I had been at Brolis Base a year when rumors began to be heard about the new alliance. That was midwinter. By spring the number of Veckan warships based at Brolis had nearly doubled. Then one morning a strange fleet appeared in the sky over the Base. Some of the serfs wailed that we were being attacked. But the Veckan ships rose to join them and the whole armada flew off to the north."

"Any idea where they went?"

"One of the cleaning women overheard an officer speak of the beginnings of a new Empire, whatever that meant."

"So you and your brother took advantage of their absence to escape?"

"Oh no! The soldiers were as watchful as ever. It was later, during the confusion, that we found our opportunity."

"Confusion?"

"Only two ships of twenty-three returned, both small Dalgiri vessels. Not a single Veckan warcraft survived. Graf and I were in the work party that offloaded the wounded. We hid in a supply locker until just before dawn. Then we overpowered the single guard left aboard, and took off for the mountains. We were unlucky. The other ship gave chase and we were forced to flee through the time gate on the Moon more times than I can remember. We jumped blindly until we found ourselves trapped in a universe without exit. We hid in a crater and

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when our pursuers came into view, we attacked them. We were lucky. We won."

"And the next thing you knew, I jumped out of nowhere at you and scared you to death, right?" I asked, trying to lighten the mood.

"I thought the Moon uninhabited in that universe. We only fled the ship because Graf wasn't sure he had destroyed the Veckan. I had resigned myself to waiting in that cave until my oxygen ran out. Believe me, after the first moment of fear, I was very glad to see you, Duncan."

I bit my lip and thought over my next question carefully. "How would you like to go home?" I asked, purposefully nonchalant.

"What?"

"Would you like to go back to Syllsin?"

"But how? We jumped blindly. I could not tell you where Syllsin is even if I were a pilot."

"No problem there. We have the jump recorder from your ship. We will be able to backtrack from that." I hurriedly sketched out our need to find out what the Dalgiri had learned from Veck. I didn't mention that she had just given Talador an even more critical problem. The Dalgiri had launched a major expedition into paratime somewhere beyond Syllsin. They had limped home with their tails between their legs. Anyone who could give the Empire that bloody a nose was someone who needed watching. I finished up repeating the request.

"Would you like us to take you home?"

"More than anything," she squealed, throwing her arms around my neck. I sat back and enjoyed it, my nose buried in her perfumed hair, my skin keenly aware of the warm, soft femininity pressed against it. Finally, she released me.

"When do we start?"

"We start planning for the mission tomorrow morning. We launch in a quarter year at the latest."

8

The expedition to Syllsin didn't get started in three months as planned. It was more like three days. When Felira and I got back to her room, I found a message from Dal Corst waiting. I said my goodbyes and hotfooted it the half mile across the Headquarters Complex to the Operations Center, where I found a state of near panic.

"Hi, what's up?" I asked after I'd waited for Dal to finish with the three people ahead of me in line.

"Where the hell have you been?" he growled, glaring at me with red-rimmed eyes.

"Out getting the information you wanted from Felira."

His face clouded up and I thought he was about to explode when he caught himself and grinned. "Sorry. Things haven't gone well for me today. Here, take this over to one of those empty desks and study it."

'This' was a record cube for a standard screen reader. It didn't take long to figure out what had gotten Dal upset.

The cube contained the analysis of the downed shuttle's trip recorder. Felira and Graf Transtas had passed through

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eleven timelines making good their escape. And if the number of transitions was surprising, the identification of the portals involved was even more so. Except for their first jump from Syllsin's moon, every gateway used was in a universe already in the Taladoran paratime catalogs. None of the portals was of prime quality. Some were open for no more than a few months at a time. Others held for a decade or more, then went dormant for centuries.

The bottom line was that the most direct path from Talador to Syllsin would be unusable in less than a month's time. The last portal in the series, the one on Syllsin's moon, would close in twenty-nine days. When it reopened sometime next year, three others in the series would be inactive. The highway between Felira's universe and Europo-American would be closed.

"Well, did you read the bad news?" Dal asked after I'd returned the record cube to his desk.

I nodded. "Reminds me of launching a Grand Tour mission of the outer planets. You either go during the few months your launch window is open or you don't go at all."

Dal snorted his agreement. "I figure our 'launch window' closes no more than one tenday from this morning."

"Any chance of finding an alternate series of portals?" I asked.

"There's always a chance of that. The interconnectivity of paratime in that region is quite high."

"Can we be ready in time?"

"We have no choice. We have to. The fleet leaves in three hundred bora, ready or not."

"Anything I can do to help?"

"Find Hral Ssaroth and volunteer your services. There are a million-and-one things that absolutely have to be done before then. Now go away and don't bother me. I'm busy."

"Temporal transition in thirty centibora. All crewmen to transition stations, all weapons crews to battle stations. Thirty and counting!"

The great bulk of Taladoran Dreadnought *City of Isvall* hummed around me as the annunciator echoed with the 'transition stations' call. I was seated in a compartment that was a smaller version of the combat control center in the lunar fortresses.

Soufilcar Jouniel sat at the master control board on a raised platform in the center of a circle of consoles. I sat in one of the two observer's stations directly behind her. Felira sat in the other. As the chronometers ticked down to zero and Jouniel directed her technicians in a calm, unhurried voice, Felira's hand sought mine for reassurance.

I was glad it did. I needed a bit of reassurance.

The bulkhead speakers came alive once more: *"Twenty centibora."*

Around us on various screens were the hulking forms of the other three vessels of our fleet. To my right was *City of Ool,* another dreadnought of the *Isvall*'s class. She was a huge spheroid covered with raised housings, weapons blisters, and radiator fins to cool the great fusion generators that powered her. Our two other ships were the *Kreshni* and *Zirca,* cruiser-class shuttles whose silhouettes were that of a blunt cylinder with rounded ends. The back-

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drop for each ship was the familiar dull grey of a lunar landscape.

"*Weapons to full standby power. Transition in ten centibora.*"

"Look alive," Jouniel called out to her technicians. "I want a full sensor sweep the instant we exit the portal on the other side."

"*Transition!*"

The screens around us flashed once as our fleet disappeared and a new world appeared in our sky. There was a flurry of activity around me as our long-range sensors began to scan for signs of hostile activity. I held my breath, waiting for the inevitable moment when we would be discovered.

While we waited, all eyes gravitated toward the main screen. Centered in it was the familiar blue-white bowling ball that I had gazed upon so often in the last couple of years. Here and there patches of brownish green peeked from under clouds, adding variety to the scene.

My inspection of the new world was interrupted by Dal Corst's voice issuing from the annunciator speaker.

"Is Felira there?"

"I'm here," Felira answered.

"Where is Brolis Base located with respect to us?"

"I'm not sure. Let me get oriented. There's Gassilrow, and Sfarble, and the Islands of Rem almost directly in the center of the screen," she said aloud, verbalizing her thoughts. "Brolis is on the other side of the planet."

"You and Duncan report to me immediately. I'm calling in the rest of the fleet and we'll get you on your way before we go into hiding. Jouniel, turn over your command to your deputy and join us as well."

"We're on our way."

9

The Contact Team would number four, that being the minimum number who could do the job and still have a reasonable chance of escaping detection. The four people chosen were Felira, Jouniel, myself, and Hral Ssaroth. Felira's job would be to guide us and act as our liaison with the Clan Leaders. No one expected her to go against the interests of her people, but she had made it clear she considered herself in our debt and would protect our interests as well. Jouniel would be in overall command and would take care of the diplomatic haggling. Hral Ssaroth would be second in command, in charge of scientific data collection, if and when.

And me? My job was security and to act as a strong back where needed. (Look Ma, strong as an ox and almost as smart!)

We made the jump from Syllsin's moon down to the surface in a courier shuttle, one of the twenty-meter-long craft that I had used before. Our arrival in enemy territory was punctuated by the usual thunderclap of displaced air and a stomach-wrenching six hundred percent increase in the gee field around us. Even braced for it, I found myself gasping for breath long minutes afterwards.

We materialized at local midnight in one of the larger wildernesses. When we were fairly sure that our arrival had gone unnoticed, our pilot lost no time

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in racing for Transtas Keep, Felira's home town.

The four-hour flight was the wildest of my life. The pilot hugged every hill and valley across an entire continent. After the first hour I didn't need to look to see the bruises on my chest and thighs where the safety straps cut deeply into me. More than once I found myself wishing the equations of teleportation allowed point-to-point travel on the Earth. Unfortunately, they don't, and my bruised hide was fast becoming a monument to the inviolability of the laws of physics.

Well before first light we found ourselves in a wooded area near a highway leading to Transtas Keep. After unloading us and our equipment, the shuttle rose to treetop level and silently whooshed off in the direction of the nearest ocean. The crew had orders to head well out to sea before making the jump back to the fleet on the Moon. We didn't think the Vecka could detect a teleportation jump, but we weren't taking any chances on compromising our position.

We were dressed in what Felira assured us were authentic replicas of Syllsintaag hunting garb. Our equipment was completely contained in four packs that matched the green camouflage outfits, with Ssaroth's and mine being twice the size of the women's (thus the need for strong backs). We were unarmed except for hunting knives.

When the shuttle was gone we waited until it was light enough to see and then struck out for a road five miles away through thick forest. I quickly discovered that two years of low gravity and desk jobs had ruined my stamina. After half a mile or so, however, I got my second wind and began to take an interest in my surroundings.

It quickly became evident that Syllsin fauna and flora violate the rule that species tend to be replicated with little variation across paratime. Whatever the mechanism that seeds the timelines with standard lifeforms, it didn't seem to be working here. The trees were primarily giant ferns unlike any I had ever seen. The animals were different too. Once I caught sight of what looked to be a giant rabbit and a quick glimpse of the avian life left me convinced that I had seen a feathered pterodactyl.

The road we sought turned out to be a more or less conventional blacktop highway. We walked beside it for almost two miles until we came to a featureless metal kiosk. Felira eased off her pack with a sigh and stepped up to the structure, opening a plate in its side to reveal a screen.

Apparently this strange monument was nothing more than a telephone booth.

Felira performed an unfamiliar ritual—the equivalent of dialing, I presumed—and after a few moments the screen cleared to reveal a bearded man.

Within seconds both parties to the conversation had great, streaming tears of joy rolling down their cheeks as they chattered away in the Syllsintaag tongue. It wasn't very long before the screen went dead and Felira turned to join us, suggesting that we pull back into the woods. "Father is sending Uncle Mors for us," she said. "We are to wait out of sight."

"What did you tell your father about us?" Jouniel asked.

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"Nothing. I told him I was coming home and that I was bringing three friends who had helped me."

Forty minutes later a small hover truck—something like an air cushion vehicle, except supported by a force-field—pulled up to the kiosk and a short, stocky man got out. I watched through electronic binoculars as the newcomer scanned the surrounding woods with sharp eyes. After half a minute, he raised fingers to lips and let loose with a piercing, ululating whistle.

"Uncle Mors!" Felira yelled, and raced down to the man beside the car.

"Better wait a few centibora before coming down," I told Ssaroth. "Wouldn't want our man to mistake you for a Veck."

"Right," Ssaroth said. "I'll be waiting for your signal."

Jouniel and I followed more slowly, both to allow them their private moment of homecoming, and to keep a wary eye all around.

10

We rode to Transtas Keep in the back of the hover truck. It was apparently a repair vehicle, to judge from the tools and parts arrayed through various bins that lined the van's sloping sides. A close examination of a few of the 'spare parts' left me with an uneasy feeling. It looked as though Syllsintaag science had advanced on a wide front before the Veckan invasion.

Just how wide was a question of immediate (and vital) interest.

The machine which would provide us with the answer lay in the bottom of my pack inside a gray case the size of a child's lunch box. In that small space was packed an electronic ferret, perhaps the most advanced computer the Confederation had ever built. The ferret was an information thief designed to probe the large computer nets every paratime civilization relied on.

I had scoffed when Dal first showed it to me.

"What, this dinky little thing is going to crack the Veckan master computer banks?"

He had chuckled. "That 'dinky little thing', as you call it, is the product of over two thousand years of computer science. We began its development about the time Pythagoras began fooling around drawing figures in the dirt."

"Oh," I said, thinking about the computer revolution at home. I tried to imagine that same mad scramble of invention after a couple of millennia and gave it up. My mind's 'boggle threshold' is too low.

Felira's father met us at the door of her home, a block-long structure that reminded me more of an apartment building than a house. The elder Transtas gave a single cry of joy at the sight of her, sweeping her into a massive bear hug. Jouniel, Ssaroth, and I hung back as we had at the kiosk while the inevitable crying and welcomes subsided. When he finally released her, he turned to us and bowed, greeting us in Syllsintaag.

"I'm sorry, but I don't speak your language," I said in Dalgiri.

His eyebrows shot up at the same time he caught sight of Hral Ssaroth's Neanderthaloid features. He turned to his

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daughter and spat out a quick sentence in Syllsintaag.

Felira responded in the same tongue before switching to Dalgiri. "Father, I have the honor to introduce Soufilcar Jouniel, Duncan MacElroy, and Hral Ssaroth, Emissaries of the Taladoran Confederation, a great nation beyond Time. I ask that they be given all the courtesies of guests in this, our home . . . Duncan . . . Hral . . . Jouniel, may I present Grafftar Bax Transtas, Hereditary Law Giver of Transtas Sept, Clan Rossa. My father."

Bax Transtas gave his daughter a quizzical look and intoned what was obviously a formula speech of welcome. Jouniel in turn gave a little speech which Felira had coached her on, saying that as good guests we would defend this household as if it were our own.

Transtas completed the ritual with a final bow before straightening up and turning to Felira. "I have done as you have requested, Daughter. Perhaps you will now explain what is happening here?"

Felira begged off by pleading fatigue from our long journey (it had been twenty hours since our last sleep period) and the overriding need to discuss a family matter of the gravest importance. Bax Transtas demurred to Felira's wishes, possibly sensing something in her manner that hinted at the tragic news she carried. Jouniel, Ssaroth, and I found ourselves being ushered to where the rest of the family waited.

If the house was large on the outside, it was cavernous from within. Four wings, each three stories high, surrounded a central courtyard filled with green, growing things and a small fountain. A score of people ranging in age from eight months to eighty years were gathered around the fountain. We were introduced to each in turn.

Besides her mother and father, Felira's sister, uncle, and their assorted families lived in the house. These, it was explained, were only the *immediate* family. Apparently just about everybody in town could claim a distant blood relationship. Being a member of a clan other than Clan Rossa in Transtas Keep appeared to be somewhat akin to being a non-Mormon in Salt Lake City.

After the introductions were over, Felira's mother showed us to our rooms on the uppermost floor of the house. After assuring herself that we were comfortably settled, she made her apologies and withdrew. The only other person we saw that day was the young girl who brought us our lunch and dinner.

Between meals we loafed, talked, and played three-handed card games with a Syllsintaag deck I found in my room. Occasionally we would hear the sounds of sonorous chanting emanating from somewhere below, and once a curiously flat-sounding music floated in through the open door. Shortly after dark, Jouniel said goodnight and retired to her room. Ssaroth and I talked a couple of hours more before he too took his leave. I lay down in my bed and was asleep in seconds.

The next thing I knew a small hand was shaking me awake, and its owner—a cherubic little girl of six—told me in broken Dalgiri that breakfast was being served in the main courtyard. After a quick shower and shave, I made my way to the lift.

The whole family was already there,

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laughing and talking as though nothing had happened the day before. I took an empty chair across from Felira and on her father's right.

"Good morning, sleepyhead," Felira said, laughing. "Are you hungry?"

"Famished. Why didn't someone wake me earlier?"

"I looked in on you," Jouniel said from two places down the table on the other side. "You were dead to the world. That hike must have really tired you out."

"I hope you will understand about yesterday," Felira's father said, passing me a bowl of fruit. "We of Syllsin mourn our dead in private."

"I understand, Grafftar."

" 'Grafftar' is a title. In this vile language we are speaking, I would be called 'Judge'. My friends call me Bax."

"I'm Duncan."

"I know who you are, young man. My daughter has had much to say on the subject."

Ssaroth chuckled from his place across from Jouniel. "It will be interesting to see if the flesh-and-blood version can live up to the fictional account."

I pretended I didn't hear him, and dug into breakfast. I would have been more convincing if the whole family hadn't broken into hysterics at his rather lame joke.

After breakfast, Bax Transtas led us to his library.

"Shall we get down to business?" he asked, suddenly sharp-eyed and suspicious. "My second daughter tells me I owe you people a debt. How much is it going to cost me?"

"Has Felira explained who we are and where we come from?" Ssaroth asked.

"Yes," he said, eyeing Ssaroth. "Although I am still having difficulty accepting that a Veck can be other than a Veck."

"We assure you, Grafftar, that what Felira has told you is all true," Jouniel said. She hesitated a moment before launching into her prepared speech, basically a speeded-up version of the history of the Taladoran/Dalgiri War and a recounting of our discovery that our enemies had the Syllsintaag teleportation generator.

She finished with: "To be blunt, Grafftar, we are here to discover what else our enemies may have learned from your masters. We cannot again allow ourselves to be caught so thoroughly by surprise."

"And you wish us to help you attach this . . . ferret, did you call it? . . . to a stronghold information bank?"

"Yes, Grafftar."

"Are you willing to help us in return?"

"We cannot, Grafftar," Ssaroth said. "Our stay here is limited. Perhaps in the future when we have charted a secure path between your world and our own. . . ."

Bax looked pensively into an unlit fireplace, hesitating at length before speaking. When he finally broke silence, it was with a feeling of deep regret:

"I owe you my daughter's life, a debt that cannot easily be repaid, but you ask a great deal. Do you expect us to attack the governor's stronghold itself? If so, I must tell you my daughter's life, as dear as it is to me, is not worth it. Such

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a move would cost us thousands of lives at the very least."

"If need be, Grafftar, we can call down our fleet and use it against any installation you name. Your people need not take an active part."

"And after you have left? Do you think Veck will not suspect that we had a hand in it? No, I do not have the power to rule on this. I will have to place it before our Revolutionary Committee. In the meantime, I think I had best get you three and Felira hidden. This is a small town and tongues will wag."

Dinner that night was a private affair. Jouniel, Ssaroth, and I dined with Felira and her parents in their apartments. Afterwards, we found ourselves hustled out the back door to the same hover truck we had arrived in. It was well past midnight when we finally arrived at our destination, a farm in the middle of a vast wilderness.

11

Life on the farm took on a simple routine while we waited for word from the Revolutionary Committee. Up with the chickens, Felira and I helped the owner and his wife with their chores while Jouniel pored over a stack of Veckan history books Bax Transtas had given her, and Hral Ssaroth spent his time brooding.

In the afternoons, we hiked the surrounding forest and tried to forget the deadline that was bearing down on us. This particular afternoon we were exploring the territory to the north for the first time. I wore a pair of tattered shorts, hiking boots, and a backpack. Felira was similarly attired, with the addition of a sleeveless blouse of light cotton tied in a knot at her waist. We had invited Jouniel along, but as usual she pleaded the press of work.

I was beginning to worry about Jouniel. She pored over her small library all hours of the day and night. There was something about Syllsin that vexed her. Whatever it was, solving the mystery had become an obsession with her. The only time she would halt her studies was during the two hours each day she and Ssaroth spent conferring with Dal Corst. The subject of these conferences was always the same: What to do if the Revolutionary Committee delayed much longer?

Time was running out.

It was now T minus 120 hours and counting—just five short days before the long chain of portals back to Europo-American and home was broken and we were marooned.

Not that the 'marooning' would have to be permanent. We already knew of an alternative series of transitions that would get us home—the path through time the Dalgiri used to travel to Veck. But four ships can no more fight Dalgir than a moth can fly in the face of a hurricane. So if we delayed longer than five days, we would be stuck until we were able to scout out a brand-new transition series . . . assuming one existed, of course.

So while I enjoyed myself with Felira, Jouniel held frenzied negotiations with Dal, and Ssaroth refereed. Under discussion was the date and time when *City of Isvall* would stir from her resting place and take matters into her own hands. If the Syllsintaag delayed too

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long, the tacticians aboard the flagship planned to raid a stronghold, hook into its computer net, suck it dry, and escape to another universe before the opposition could get organized. The only problem with such a plan was that: (A) it would betray Felira's people and leave them to take the Veckan revenge alone; (B) it would require flattening Brolis Base with nuclear weapons, thereby killing a million or so innocents; and (C) it might not work.

Jouniel wasn't the only one who seemed distracted lately. Felira had been unnaturally quiet for the last week herself. I thought I knew what was bothering her, and decided to bring it out in the open.

"You know, of course, that we are going to have to do something soon, don't you?" I asked as we sat beneath a giant fern and rested.

She looked at me with troubled eyes and sighed. "I know. Jouniel speaks a great deal to that little radio of hers. It isn't hard to guess what is being said."

"Is there anything you can do to convince your father and his friends of the seriousness of the situation?"

"I have tried," she said, tears welling in her eyes. "I report to Father every day by the courier who brings Jouniel and Ssaroth messages, just as they report to your higher authorities on the Moon."

"And?"

"The sentiment in Committee is going against us. I fear that they will vote to forbid the Clans to help you."

"You know what that means."

"That the fleet will take independent action and there will be war again on this world."

I nodded. "Unless we can stop them."

We sat in silence for a long time. After one of those eternities that pass in a few seconds, I leaned over and kissed her. She returned the embrace eagerly. After a longer while, we broke for air and I sat back to think.

"We've got to do something," I said.

"But what . . ." Felira froze in midsentence and glanced skyward.

"What's the matter?" I asked, my voice a harsh whisper.

"Aircraft, don't you hear it?"

I cocked my head to listen. Sure enough, off in the distance there was a buzzing sound like a giant angry bee.

"Veckan?"

"No. Their aircars are silent. This sounds like one of ours."

We crouched and listened as the buzzing got louder. Suddenly, the plane passed over us and arrowed straight toward the farm. Felira relaxed as soon as she caught sight of it.

"It's all right. That is a courier craft for the Revolutionary Committee. They must have come to a decision."

We jogged all the way back to the farm. Jouniel and Bax Transtas met us at the door. Jouniel had a twinkle in her eye.

"What's up?" I asked.

"Get into your best clothes and pack the ferret. We are going to a party."

"A what?"

"A party. We have been invited to drinks and dinner by the District Governor himself."

"WHAT?"

"Come on, now, we don't want to be late."

* * *

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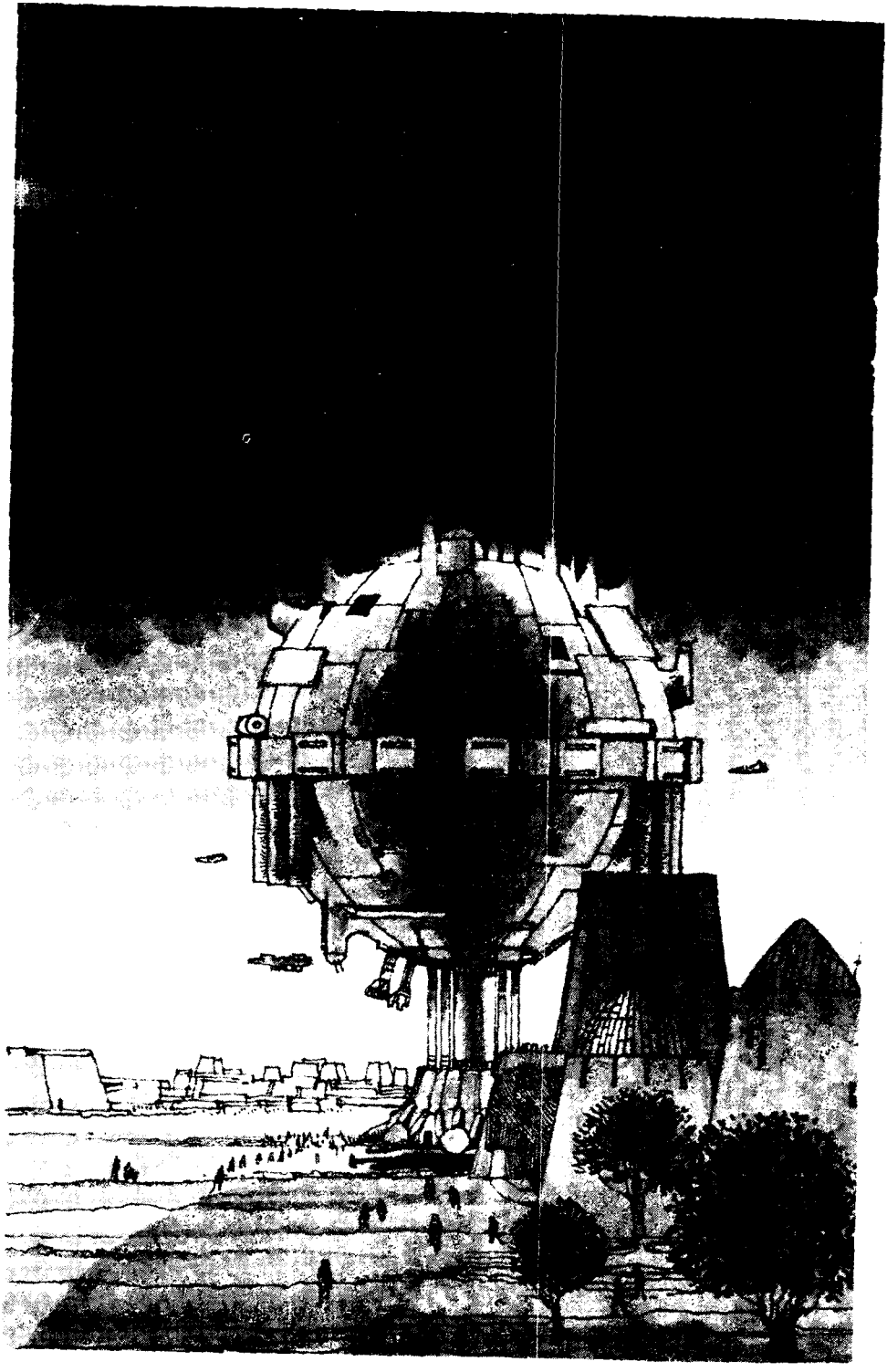

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Bax Transtas briefed us on the situation as we flew northwest toward the major Syllsintaag city of Rossa-Home, seat of the largest of the extended clans and site of the local Veckan stronghold.

As Jouniel had surmised, the Revolutionary Committee had quickly divided into two camps. One had welcomed the opportunity to help us, while the other could see no good coming from our presence on their timeline. It had turned into a bitter fight between those who saw it as a chance to gain a powerful ally and those who liked change even less than the status quo.

Bax Transtas, on the strength of his daughter's reports, had led our proponents. Every time the debate threatened to go off track, he hauled it back again, pointedly noting that time was running out and the ships on the Moon would not wait forever. Finally, when everyone had exhausted themselves, he and a few like-minded members worked out a scheme to satisfy everyone.

The plan called on us to get help from an unlikely source, the Rossa-Home District Governor.

Like many conquerors throughout history, the Vecka had grown soft from easy living. They were the War Masters of old in name only, leaning ever more heavily on their serfs and servants for the daily nuts-and-bolts work of running their dominion.

The district governors were the landed gentry of Syllsin feudal society. After a century of revolts, assassinations and riots, most had learned to stay in their fortresses and were content if the taxes were collected on time and the Press Gangs made their quotas for the technical schools on Veck.

Baron Ylgost 't Prasilwant was Governor at Rossa-Home Stronghold. The Baron had recently sent word to the Council of Clans that he would be entertaining an important dignitary for the feast of *Baedroph* this year, and that the usual roster of Clan Leaders and their ladies would be expected to attend.

It was Bax's plan to smuggle Jouniel and me into the stronghold as members of the Syllsintaag delegation. Ssaroth would bring the ferret later, entering the fortress openly as a Veck. Once inside, we would bide our time until we could slip away unnoticed and tap the ferret into the stronghold computers. With luck, we would have the information we needed and be quickly gone with the Vecka none the wiser.

I had to admit Bax's idea was better than any we had thought up. It was a thousand times better than the battering-ram approach Ssaroth and Jouniel had been talking to Dal Corst about.

We arrived in Rossa-Home City just as the sun dropped below the horizon and painted the sky in a symphony of reds, yellows, and golds. Bax had a hover car waiting to whisk us to a block of row houses near the center of the city. Inside, we found a delegation from the Revolutionary Committee waiting for us. Bax introduced each in turn, and we clasped hands all around.

After the introductions, Jouniel and Felira were ushered upstairs to where the best makeup artist in the district waited. As far as Jouniel was concerned, we had no choice. She *had* to be disguised. No one would ever mis-

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take her for a native. Felira was going under the brush in case someone recognized her and had heard the story of the missing Dalgiri shuttle.

We had debated disguising me as well during the flight from the farm, and decided against it. My looks were fairly close to local norms, especially since my hikes with Felira had left me deeply tanned. Bax judged the risk of wearing my own face to be less than if I wore makeup.

As the two women were being worked on, Bax motioned Ssaroth and me upstairs to a back room on the third floor. I gasped as I glanced out the window. Sitting in the center of a cobblestone-paved clearing that must have been a square mile in area was a squat fortress with sloping armor-plated sides that glowed dully red in dusk-light.

I studied the fortress with a pair of electronic binoculars Bax handed me. The building was featureless save for a row of gunports near the top of the walls. The only other opening was a tall gate at the base of the wall.

"Rossa-Home Stronghold," Bax said. "Study it carefully. Afterwards we will look at sketches of the interior and maps showing the computer rooms."

I was still scanning the fortress when Jouniel joined us. She had been transformed into a Syllsintaag matron so completely that I didn't recognize her at first. She moved to the window and stared at the stronghold.

"Big, isn't it?" she asked. "See anything interesting?"

"Look at the aircar," I said, speaking in Taladoran and pointing at the patrol vehicle I had watched circle the fortress ramparts for the last ten minutes.

Jouniel borrowed the binoculars and studied the car in the growing dusk. "So?"

"If that aircar is a three-hundred-year-old model, I'll eat it."

"An interesting thought," Jouniel said, "especially in light of a few discrepancies I have noted."

"Such as?"

"The Veckan tongue, as it is spoken by our friends here, doesn't jibe with the notion of a three-century-old colony from the Dalgiri Empire either. It's too modern by far."

"Come now, Jouniel," Ssaroth said, laughing. "How could that possibly be? It has merely evolved along similar lines. A coincidence, nothing more."

"Perhaps," she said, suddenly switching back to Syllsintaag. "I beg your indulgence, Grafftar. My colleagues and I were discussing some technical details concerning yonder vehicle, for which we lack the proper vocabulary in the Veckan language. Will you forgive our impoliteness?"

Bax didn't make an issue of it, but I suspect he wasn't fooled.

In another hour we had been thoroughly briefed and had gone over a number of sketches and hand-drawn maps of the stronghold's interior. We were as ready as we would ever be.

Most of our fellow conspirators had already gone ahead, leaving in small groups of two or three. Each carried a gaily wrapped package, the token of esteem the baron required from his guests to convince V.I.P.s from home that all was well in the district.

This was one time when the Syllsintaag were more than happy to go along with the charade. Ssaroth too would

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carry a gaily wrapped package into the fortress. His was rectangular, about the size of a child's lunch box.

It answered to the name 'ferret'.

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"Ah, the Law Giver of Clan Rossa, welcome to my home!"

The speaker was an obscenely fat man with overhanging eye ridges and misshapen teeth. He was dressed in a dark uniform, with a holster and an ornate dagger hanging from a tooled leather belt. Bax acknowledged his greeting with a deep bow.

"Greetings, Excellency. I hope all is well with your family."

"Well enough, Grafftar Transtas, well enough. Except for my youngest, Cephiel. I don't know what I am going to do with that boy if he doesn't stop getting involved with the native girls. But then, your wenches do enjoy the attentions of our young men, do they not?"

The governor's voice was one that carried. He didn't seem to notice the sudden stiffening of Syllsintaag spines throughout the large hall. If Bax felt the same urge to throttle him everyone else seemed to, he didn't show it.

"Excellency, I would like to introduce my cousin and her family—Mullarow Transtas; her son, Vrieler; his wife Harla . . ." We each kissed the Veck's outstretched palm as we were introduced. (Felira was right. They do stink.) ". . . Mullarow, this is our host, Baron Ylgost 't Prasilwant."

Jouniel went into her 'giggling matron' act while I did my best to project the image of a stupid but honest lunk.

The baron seemed to lap it up.

"You were always a good servant, Grafftar. I am mindful to grant you a boon. Name what you will."

"I have but a single wish, Excellency. My daughter is being held at Brolis Base. If you could intercede with the Governor of that District to have her returned to me. . . ."

"Hmmphh. If I return your child to you, others will besiege me with similar requests. I will have to think upon it."

"You are most kind, Excellency."

"Pardon me, children, but I must see to my guest of honor. Would that I could send a servant, but we don't want to offend the great man, now do we?" With that he waddled off into the crowd.

"What was that business about releasing Felira?" I asked, my voice just loud enough to carry the few inches to Bax's ear.

"I was testing to see if he has had any reports about the stolen shuttle."

"And?"

"Inconclusive. The baron is a crafty old lizard and he could have been playing with me."

With that disturbing thought, we dropped back into character and began to circulate. Felira and I studiously avoided talking to anyone we hadn't met in the safe house. Felira did most of the talking. I mostly gawked in character at my surroundings.

Someone had gone to a lot of trouble to remodel the utilitarian walls of the original fortress, constructing something in an architectural style that was a cross between Late Rococo and Early Parisian Whore House. Like the gov-

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ernor's ill-fitting uniform, it merely heightened the feeling that the War Masters of old had fled this place, leaving their soft, venal offspring in their stead.

A few late arrivals filtered in, including a half-dozen Vecka. These were treated with exaggerated respect by the second-class citizens present. Mostly they seemed bored with it all and quickly gravitated into their own little clump at one end of the room. That was the end with a floor-to-ceiling tapestry portraying the glorious history of Veck, and incidently (according to Felira), hiding the gunports behind which a dozen household troops kept watch on the gathering.

An hour later a high-pitched squeal went off in my ear. I steered Felira to where Bax and Jouniel stood with two Revolutionary Committee members—a tall, lanky man named Potnir and a hulking wrestler-type named Noor. To the casual observer it should have looked like the usual Brownian motion of a cocktail party.

"Ssaroth and the ferret are here," I reported.

"Then let us begin," Bax said, his lips barely moving behind the idiot's smile he had kept on his face all evening. "Duncan, you start off."

"Good luck," Felira said, squeezing my hand. I wanted to kiss her, but settled for returning the squeeze. I turned on my heel and sauntered out the door as though I had every right to be where I was and didn't have a care in the world.

Ssaroth was in the curtained alcove we had chosen for rendezvous. He was dressed in much the same style as the baron, except for lack of weapons. Bax, Potnir, and Noor quickly joined us, and we set off in extended single-file formation, tiptoeing through deserted corridors toward the stronghold's administrative section.

Ssaroth was our point man in case we encountered anyone in the corridors. It would be his job to distract any guards or civil servants we met long enough for Potnir and Noor to overpower them.

I licked dry lips and tried to forget my fear as we inched along deserted corridors. Twice we waited without breathing as Noor neutralized automatic sensors. Once we tiptoed past a lighted office that was occupied. Luckily for him, the servant inside remained hunched over a screen with his back to us while we slipped past his open door.

Finally, we arrived at the computer center to find our way barred by a locked steel door. Noor tackled the job and we were inside within half a minute. Ssaroth waved the overhead lights on as soon as the door closed, and I went to work with the ferret.

Installing a ferret is a simple matter of removing an inspection cover or two from the host machine, tracing cables, and then making a few quick connections with inductive pickups.

As I traced cables I began to notice details of the terminal's construction and was immediately overcome by the same feeling I had had watching that aircar circle the ramparts earlier. Something didn't feel right. The more I looked, the harder it was to shake the conviction that this particular machine was more modern than current Dalgiri models.

Which was stupid.

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When the Vecka had left the Empire, Dalgiri computer science had been only slightly more advanced than that of modern-day Europo-American.

After five minutes of cable tracing, I had the ferret hooked up and energized. Now all we had to do was sit and wait for it to do its job. Half an hour went by like molasses, and I began to wonder if something had gone wrong. I didn't have time to pursue the thought.

Suddenly there were voices at the door.

Potnir was lightning quick switching off the overhead light. We sat in the dark holding our breaths, praying that whoever it was would go away. No such luck. The door snicked open, spilling the corridor light inside in a long rectangle across the floor. I shrank back into the shadows as far as I could go, crouching over the flickering lights of the ferret so as to shield them with my body.

The door snicked shut again, but not before two Neanderthaloid silhouettes stepped inside. Then came a series of Dalgir curses as a familiar voice searched for the light control.

The lights blazed on. And things began to happen so quickly that it took long minutes afterward to unscramble them in my mind.

The sudden radiance caught Baron Ylgost in open-mouthed, bug-eyed surprise. His companion must have been equally shocked at discovering the supposedly empty room full of men, but he masked it better. That didn't surprise me, for the baron's companion was no Veck.

Just by the way the hair on the back of my neck stood up I could tell he was an inhabitant of the Dalgiri Empire. A Dalgir is to a Veck what Hitler was to Mussolini.

We were all frozen in our tracks for an instant just before chaos broke loose.

Ylgost screamed and reached for his holstered pistol at the same moment the Dalgir spat out two words and grabbed for an inside pocket of his chemise.

Both were milliseconds too late, as five bodies propelled by desperate leaps converged where they were standing.

Bax, Ssaroth, and I arrived more or less simultaneously at the Dalgir's position, while Potnir and Noor concentrated on the baron. Unfortunately, I arrived a bit ahead of the others and encountered a rapidly rising elbow full in the face.

After that I don't remember much about the fight except that the explosion of the baron's pistol added to the already considerable ringing in my ears, and was itself followed by the flash and reflected heat of a beamer bolt.

Things quieted down after that. When the room had ceased its spinning, I clambered carefully to my feet. Potnir was down in one corner, his features contorted by pain, with a bullet hole in his right shoulder. The Dalgir was down too, but feeling no pain.

He was dead, his upper torso burned away by a beamer. Ssaroth stood over him, the weapon in his hand. The sight of Ssaroth triggered a stray memory that was still swirling about in my head, looking for a place to land.

When the lights blazed on, the Dalgir had been looking directly at Hral Ssaroth. He had called out to our pseudo-Veck in shocked surprise.

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He had called him by name!

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Bax moved to aid Potnir while Noor sat astride the fallen baron. Ssaroth locked eyes with me and must have seen my thoughts there. His face contorted into a slow smile and he raised the beamer to point at my midsection.

"Help me here," Bax hissed from Potnir's side.

I gulped and tried to put down rising panic. "Bax . . . Noor, stand up *slowly*."

"What?" Bax asked, twisting to look over his shoulder. He saw Ssaroth with the beamer and confusion flashed across his face. Noor seemed to understand the situation immediately. He rose to his feet and backed away with his hands in plain sight.

"All of you get back against that wall," Ssaroth growled. He almost seemed to be enjoying himself as Bax and Noor hurried to comply. We were quickly herded to one side of the room while Ssaroth backed away to where he could watch us. Potnir lay moaning on the floor behind him.

"What is happening here?" Bax demanded.

"I think," I replied, "that Hral Ssaroth is telling us he works for the other side. Am I right?"

"You figure it out."

I caught a flicker of movement at the edge of my vision and forced myself not to look. Instead I tried to drill two holes through Ssaroth's head by sheer force of personality. I licked dry lips and nodded.

"I would say that my first impression the day we met was right. You *are* a Dalgir, aren't you?"

He laughed out loud. "You will never know, Duncan MacElroy." He raised his beamer to point directly at my face.

I lunged to one side just as Ssaroth tumbled over backwards, propelled by Potnir's flying tackle into the backs of his knees. There was another beamer blast, and another.

When I regained my feet, Ssaroth was at the bottom of a pile of humanity and we had another corpse on our hands. Poor Potnir lay beside the scene of battle, staring blindly upward, his chest burned through with a beamer bolt.

In a matter of seconds, Ssaroth was unconscious beside him and Bax was in possession of the devil's toy. He clutched it in one hand and gasped for breath.

The ferret picked that moment to signal that it had completed its job. I turned to it and began disconnecting cables and putting things back the way they were.

"Never mind that," Bax hissed. "Pull some of those wires out of there so we can tie these two up before they regain consciousness."

I complied, feeling a bit foolish. Bax and Noor made surprisingly quick work of trussing our prisoners. The baron was just starting to come around as they finished.

"What about Potnir?" Noor asked.

"Drag him back of those machines over there," Bax said. "I'll tell Oraz how his son died . . . if any of us get out of here." He prodded the baron with his boot. "Wake up, Excellency."

The baron stirred. His eyes opened

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and he caught sight of the body beside him, and then Hral Ssaroth. His eyes were suddenly wide with terror. For a moment he looked as though he would faint. "W . . w . . . what is the meaning of this, Transtas?" he blubbered.

"I'll ask the questions, Excellency. Who was your friend, and what were you two doing here?"

"He is . . . was . . . Ambassador Ontoosa Mri of the Dalgiri Empire. The ambassador had need to contact Brolis Base. Something about a stolen shuttle."

"Did you happen to mention our conversation earlier this evening to the ambassador, Excellency?" Bax asked.

"Of course. Mri specifically requested that you be invited to his reception. When I confirmed that you had arrived, he insisted we come down here."

"And this other?" I asked.

Ylgost gulped. "I met him at Brolis Base with Mri three-and-a-half years ago when the Dalgiri first came to this universe. He was Mri's commander."

"Don't you have that backwards?" I asked. "Ssaroth worked for Mri."

"No. The ambassador was this man's aide at that time."

"Cease your caterwauling, Ylgost!"

Bax turned his attention to Hral Ssaroth, who was awake and glaring at the governor. I noticed that someone had hung a mouse under one eye. I hoped it had been Potnir.

Bax turned to me. "What now?"

I scooped up the ferret. "We've got to get this to Dal Corst. Him also," I said, pointing to Ssaroth.

"Noor! Go back to the reception and tell Felira and the woman emissary to come here. Do not attract attention."

Noor slipped out the door like a ghost and was gone.

"What now?" I asked Bax.

"We have to get you three out of here as quickly as we can. You take that one . . ." He gestured at Ssaroth. ". . . I will keep the other and use him to order the guards to lay down their weapons. After that we will try to get our people away before warships can be called in from Brolis and Veck."

Five minutes later there was a discreet tapping on the door. Bax opened it while I covered him with the beamer. It was Jouniel and Felira. Felira gasped when she discovered we had taken Ylgost prisoner. Jouniel did the same when she saw the trussed-up Ssaroth. I quickly brought her up to date on what had transpired.

We spent the next ten minutes embellishing Bax's plan. It was decided that Felira, Jouniel, and I would take Ssaroth and make our way to the roof. There we would steal an aircar and light out for the farm where we had hidden the communicator.

Once at the farm, we would summon *City of Isvall* from her lunar lair. In the meantime Bax and Noor would take the governor back to the reception and force him to order the household troops to lay down their arms.

If all went well, about the time the Syllsintaag had taken Rossa-Home Stronghold they would have a Taladoran fleet overhead to provide protection while they evacuated the city.

We sealed both Ylgost's and Ssaroth's mouths with electrical tape I found in a tool cabinet and pushed them

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out the door. I led the way, with Jouniel and Ssaroth next, and Felira bringing up the rear. I carried the beamer while Jouniel supervised our newly discovered traitor. She had rigged a thin wire garrote around his neck so that all she had to do was give one sharp tug to choke him. The arrangement included a one-way slip knot. She had taken care to explain its operation. Ssaroth seemed happy to cooperate for the moment.

The corridors were still deserted. We met no one until we reached the rooftop car park. Two quick beamer bolts took care of the guards on duty. We dragged their bodies under the raised landing pad where they wouldn't be soon found, and stripped them of their weapons. Now all three of us were armed.

We hustled Ssaroth into a back seat with Jouniel while Felira and I took the front.

"Can you fly one of these?" Felira asked.

"Hope so," I said. "Form follows function on most timelines, so this shouldn't be too different." I scanned the dot-dash Dalgiri script on the instrument panel, identifying various controls and their functions. I was in luck. The car was nearly identical to a Taladoran model.

"Hold on people, here we go," I yelled as I energized the lift-and-drives. The car rose sluggishly, as though the attitude drivers hadn't been properly calibrated, and headed off into the night.

* * *

I had forgotten that damned pesky patrol flier. It was on us before we crossed the Rossa-Home city limits.

"Halt or be fired upon!" is a rough translation of the command that issued from our speaker. At the same time, a light like a sun gone nova flashed on us. I took a deep breath and energized our comm unit.

"Who is the dog that dares challenge me?" I growled in my best Prussian Officer style, my patented recipe for cowing underlings. Works every time.

Except this time it didn't.

"I repeat, stop or be fired upon!"

"This is the personal car of Ambassador Ontoosa Mri of the Dalgiri Empire. Fire on us and he will have you skinned."

Please stop," the voice on the radio said, having lost some of its composure. I let out a sigh and congratulated myself (briefly) on not being dead.

"Why?" I asked.

"You do not have clearance. I am required to stop all air vehicles without clearance."

"Come alongside," I said. "You can visually identify the ambassador and then leave us to go about our business."

There was a long silence while the other pilot debated with himself. No streetwise American cop would have fallen for it, but then the Vecka were getting sloppy in their old age. Besides, we must have looked harmless.

The miniature sun astern changed position and began station-keeping off to our left. I ignored him for the time being as I frantically scanned the instrument panel.

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"Where the hell do they hide the door jettisons on these things, Jouniel?"

"Try under the dash, just above your right knee."

I found it and pulled. Several things happened at once. As the door separated, the slipstream nearly yanked me out of my seat and the car bucked wildly. The sudden yaw to the left probably saved our lives, for in the next instant the splat of hot lead punching through sheet metal overpowered the roar of the wind.

I fought my steed with one hand while aiming the beamer with the other. The window behind me exploded in a storm of broken glass. I squeezed the firing stud. I fired twice more and the searchlight went out as the patrol flier fell off on its side and headed in a steep dive for the ground.

I started to breath again.

"Anybody hurt?"

"Just afterimages of the beamer bolt," Jouniel yelled from the back seat.

"No problem," Felira echoed from beside me.

"How's our guest?"

"We've got glass all over us back here, but he isn't seriously damaged, I'm sorry to say. That was good shooting, Duncan, especially with a hand weapon."

"We were lucky," I said, scanning the instruments once more. "Damn!"

"What's the matter?"

"We've been holed. If I'm reading this charge indicator right, I've got about two more minutes of flying time before we run out of juice."

I put the car down on her last ergs, skimming over the tops of pseudo-ferns that would have made some of the lesser redwoods jealous. At the last second, a clearing intruded into the circle illuminated by the landing lights. I dropped the car into its too-small length, sliding to a halt in a shower of weeds and grass.

By dawn we were twenty miles from the wreck and dead tired. We stopped to rest deep in the endless forest while Felira tried to figure out where we were.

"What do you think?" I asked.

"The farm is over that way," she said, pointing with the compass we had salvaged from the air car. The distance she named was the equivalent of fifty miles.

"Oh, my aching bunions," I groaned.

"Shall we stop?" Jouniel asked.

"We have to stop," Felira said. "I can't walk another step."

I knew what she meant. My legs felt dead at the knees. The only comfort I took from our situation was that our prisoner looked worse than I did. "Okay, four hours' rest and then we go on."

There was no argument as everyone, Ssaroth included, slumped to the lichen-covered ground. I unslung the ferret from the makeshift pack I had built and used it for a pillow. After we had rested a bit, I ran over our options in my head.

We didn't have any.

Rossa-Home was closer than the farm, but we couldn't go there. An hour before dawn we had seen a flash that lit up the whole of the sky behind us. Minutes later the wind had changed direction with a rush and the glow hadn't died completely away for the better part of an hour. If Rossa-Home still existed, it was already in enemy hands and chances were good that our friends were either captives or dead.

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We had nowhere to go but ahead. Fifty miles? Easy really. A man in good condition can walk that in twenty hours on level ground. Only this wasn't level ground. Once before I'd found myself afoot when an aircar had been shot from under me. That hike had only been thirty miles.

It had taken two days.

Assuming we could make the same progress, it would be four days before we reached the farm and summoned help from the fleet on the Moon. There was only one problem.

In four days the portal would be closed and the fleet gone.

I was startled out of my concentration by Hral Ssaroth's voice. Funny, but I had never noticed before how rasping it was. Which just goes to show that you'll overlook peculiarities in your friends, but not your enemies.

"Give yourselves up, MacElroy. You and the Taladoran woman will be treated as prisoners of war and given every consideration."

"And Felira?"

He laughed. The sound had the overtones of a fingernail scratching slate. "She's no concern of mine. If that fool Ylgost doesn't kill her, I might take her for my own herd of slaves. I'm always on the lookout for good breeding stock."

I throttled the sudden anger that boiled within me, and forced myself to remain calm. "Watch your mouth. The only thing stopping me from carving on that ugly face of yours with this beamer set on low is the fact that you are going to have to walk fifty miles under your own power."

"And if I refuse to walk?"

"I'll start carving now."

We locked eyes for a long minute. Finally, he blinked.

"I'll walk."

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Full dark at the end of the second day found us ready to drop in our tracks still fifteen miles from our goal.

Happiness is having a full belly and no blisters.

We had been following a wide slash in the endless forest of ferns, an area of low underbrush that meandered in the general direction we wanted to go. Felira had identified it as the scar left by a wind-driven firestorm caused by a Veckan 'object lesson'. Just before dark we halted in the midst of a ruin that had once been a medium-sized city.

A few wild berries grew among the crumbling walls and rusting steel. We gathered as many as we could find, pooled our resources, and split them four ways. Afterwards, Jouniel and Felira went in search of a handy bush while I babysat the prisoner.

"Are you asleep?" Ssaroth asked, his words slurred by a puffy lower lip where a low-lying branch had caught him earlier in the day.

"Don't you wish?" I asked, glancing over toward where I had trussed him up.

"An interesting place, this, is it not?"

"I suppose," I said. In truth, I was so tired I wouldn't have been interested in a proposition by the reigning Hollywood sex bomb.

"Look around you, MacElroy. Here dwelt enemies of Dalgir."

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"You mean enemies of Veck, don't you?"

"They were once Dalgiri and will be again, sooner than they realize."

"So much for 'honor among thieves'," I said, not really surprised. Cozying up to the Empire was usually like going to bed with a boa constrictor—you frequently woke up in the middle of a squeeze play. "What about this place?"

"It would be a shame if this ruin were San Francisco, or Los Angeles, or Detroit."

I lifted my droopy eyelids and peered through the gathering gloom. "I suppose this is the preamble to a recruiting speech."

"Why not?"

"If we are going to be on the same side, perhaps you will explain what is going on."

"Come now, you don't really expect me to expend all my bargaining counters while still a prisoner, do you? Help me against the Taladoran, and I will consider us allies."

"Then I guess the deal's off. You have no reason to trust me, and I have every reason to distrust you. You tried to kill me, remember? Hardly a basis for a partnership, is it?"

Ssaroth started to say something else, then shut up as we heard Felira and Jouniel making their way back from the bushes. Jouniel doublechecked his bonds before easing down beside me.

"Did you two have a nice chat while we were gone?"

"Sure," I said. "Ssaroth offered me a job."

"You didn't take it, I hope."

"Couldn't. Have to give up too much self respect."

I took the first watch while the others tried to get some sleep. It was one of those evenings that drive poets into fits of rhapsody, where the stars seem endless and Venus hangs like a twenty-carat diamond above the western horizon. The Moon was in its first quarter and I passed the time trying to pick out the places where I knew the fleet was hidden. I soon tired of that, made myself as comfortable as you can get sitting on a pile of bricks, leaned back, and stargazed.

I don't know how long it was before I realized that Orion the Hunter had an extra star in his right foot. I felt a mild exhilaration at the thought that I was seeing a newborn nova. I nursed my excitement as long as I could—to combat sleep—but the feeling wore off and I resumed my search of the heavens.

Within fifteen minutes I had identified at least six other stars I didn't remember. So much for my nova hypothesis. Something was very, very wrong with this universe. Either that, or. . . .

"MacElroy," I muttered to myself, "Your mind has finally snapped."

Somehow I managed to keep my eyes open until midnight when I shook Jouniel awake to stand the next watch.

She roused fitfully. "Anything to report?"

"Just that the stars are out of position," I mumbled as I lay down next to Felira.

I seem to vaguely remember Jouniel answering, "Yes, I know," but it could have been my imagination. I was asleep before my head reached the ferret, which I was still using as a pillow.

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"Wake up, Duncan!"

I roused to the sound of Felira's voice and opened my eyes to darkness lit only by starlight.

"What's up?" I whispered.

"I think I saw a Veckan shuttle."

That brought me wide awake in a hurry.

"When?"

"Just now. There were three bright flashes over the horizon. I glanced up and there it was."

"Where and how fast?"

"Just above the tops of the trees in the direction of Rossa-Home. I think it was hovering. At least, it didn't get any bigger while I could still see it. What do we do now?"

"We get the hell out of here!"

I shook Jouniel awake and then our prisoner, explaining the situation in as few words as possible. I made it clear to Ssaroth that I would brook no trouble from him. Then we moved out, striding as quickly as we could in the darkness. Unfortunately, that turned out to be little better than a slow creep.

I called a halt as soon as the eastern sky had lightened sufficiently to make out the distant mountains around us. There was nothing in sight except a few of the big pseudo-pterodactyls. We rested just long enough to catch our breath and gather a few gulps of berries before pushing on.

Within a mile the fire slash petered out and we reentered thick forest. We had traveled about five miles when Felira, who had taken over the lead, silently signaled a halt.

"What is it?" Jouniel whispered.

"I think I saw something," Felira whispered back.

"Go to cover," I commanded, diving into the undergrowth by the side of the animal trail we had been following.

We lay there for ten minutes, anxiously searching for signs of movement ahead. Nothing. I was about to order the trek continued when Jouniel gasped in a sharp intake of breath.

"What?"

"I'm not sure. Could have been an animal."

"It was no animal," Felira said, her voice barely audible from five feet away. "I can see a man in a green uniform. I don't recognize the livery. Could be a serf from a household I don't know, maybe Aylthern Continent."

I craned my neck to look where Felira pointed, but could see nothing through the dense foliage. I unpocketed my beamer as the women did likewise with their captured slug throwers. We held a hurried eye-conference with each other. That was a mistake.

In the excitement we had forgotten Ssaroth.

I've got to give him his due. If he suffered from any personality defects, indecisiveness wasn't one of them. He took just two seconds to decide that the chances of escaping were as good as they would ever get. The next thing we knew, he had grabbed hold of the leash with his teeth and pulled it from Jouniel's grasp. In that same instant he was up and sprinting forward, dodging awkwardly with hands still tied behind his back.

"Halt!" I screamed, reverting to English in my excitement. Ssaroth was already two trees away, and dodging for

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cover. I snapped up my beamer almost without thinking.

The first shot went wild—the result of a lifelong habit of leading the target—but the second was right on. Ssaroth was no more than fifteen feet away when the bolt took him full in the back. He tumbled to the ground, skidding through the lichens on his face and stomach.

I scrambled to my feet and ran in a low crouch for where he lay. He was still alive when I reached him, but one look told me he wouldn't be for long. I rolled him over. His hooded eyes were glazed over in pain. He gave no indication of being able to see me.

"You goddamned fool! What made you do it?" I cursed.

Suddenly his eyes cleared, and he focused on me.

He opened his mouth as if to say something, but stiffened and died before he could find his voice.

"Is he dead?" Felira asked after I had scrambled back to where she and Jouniel lay.

I didn't answer. Everyone is entitled to one silly question under pressure. Instead, I gathered up the ferret from where I had dropped it, and loped in a crouching run back the way we had come. "Let's get out of here."

"Where to?" Jouniel asked breathlessly as she raced after me.

"There's a defensible position half a mile back," I said, glancing over my shoulder to make sure Felira was bringing up the rear.

We literally ran that half mile, stopping only when we flopped belly down into a depression in the flat forest floor just big enough for the three of us. I gasped for breath at the same time I checked the beamer's charge indicator.

"Ammunition check," I called out. "Felira?"

"Nine rounds."

"Jouniel?"

"Seven."

"And I've got seven, too. That's a total of twenty-three. It might be enough. Let's make them count."

"Jouniel and I will empty our weapons," Felira said. "You be sure to save three of those charges, Duncan."

I opened my mouth to ask why, then shut it. I knew what Felira had in mind—namely that a beamer is surer than a bullet in the mouth. It was ironic. I had always disparaged Hollywood horse operas for being overly melodramatic when, during the Indian attack, the hero runs out of ammunition save for a single cartridge each for himself and the heroine. But now that I found myself in a similar situation, it seemed the only logical thing to do.

Considering that Veck routinely reduced rebellious towns to their component atoms, what would they do to us for killing the Dalgiri ambassador and Hral Ssaroth?

We lay in silence for a long time before I reached out and took Felira by the hand.

"I'm sorry," I said.

"For what?" she asked.

"For the way things have turned out."

She considered that for a few seconds, and then half smiled. "I would rather live, Duncan. But if that is not to be, I am glad that I will be dying with friends."

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I leaned over to kiss her. We were interrupted by Jouniel's hiss.

"Shush, I see something."

"How many?" I asked, my gaze following Jouniel's.

"Can't tell. All I catch sight of is an occasional rustling of bushes. Whoever they are, they're good."

"Duncan."

"Yes?" I asked, turning my gaze back to Felira.

"I love you."

"I love you, too."

"Get ready," Jouniel said, tensing. "I think they've spotted us. Here they come . . .

". . . by the Square Gods of Lashua!"

I felt the world whirl around me as a full dozen green-suited figures materialized out of the brush and walked steadily towards us. It was all I could do to stand to greet them.

They were Taladoran Marines.

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The noncom leading the patrol walked warily towards us, regarding me as though I were some kind of tiger ready to pounce. "You Duncan MacElroy?"

"That's me," I said. I did my best to keep from grinning like an idiot, but I don't think I succeeded. Truth is, I could have kissed them all, I was so happy to see them.

"Academician Soufilcar Jouniel?" the Marine asked, his eyes flicking between Jouniel and Felira, his tone doubtful. It took a second before I realized what was bothering him. Jouniel's disguise had proven remarkably resistant to the rigors of our trek. To the uninitiated, I appeared to be in the company of two Syllsintaag ladies.

"Here, Centurion," Jouniel said. "What are you doing here? The fleet was going to stay on the Moon until I called."

The Centurion 'shrugged', a far more expressive gesture than its counterpart at home. "Those who command do not explain their motives to lowly mudfeet such as myself, Academician. Scuttlebutt has it that we intercepted a message for help from the local crag-faces to their litter mates on the next timeline over. Commander Corst ordered us down to engage their fleet as soon as it appeared on our detectors. That was two days ago.

"*Jerrap*, what a fight! We pounced on 'em like a hunting *tork* back home. Blew 'em to plasma."

"Any casualties on our side?"

"We lost a few aboard *Kreshni* to a near miss. *City of Ool* sprung some hull plates, too. Nothing serious enough to stop us from heading for home come nightfall, though. I'll feel better when we get out of this hell-den of a timeline and back to civilization."

"Do you know about the natives, Centurion?" Felira asked. "Were many killed?"

"You must be Lady Felira Transtas."

"Yes. Do you have word of my father?"

"Commander Corst sent a message with all the search parties, my lady. Your father is safe and the evacuation of Rossa-Home has begun. Casualties at the stronghold were light."

"Have you arranged transport, Centurion?" Jouniel asked.

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"Yes, ma'am. Shuttle's on its way to pick us up."

The shuttle was a hundred-passenger troop transport. Most of the Marines curled up in their couches and went to sleep the instant we boarded. Jouniel excused herself and went forward to talk to the flagship on the communicator. That left me alone with Felira in our own little island of empty seats next to one of the few windows in the boxy craft. We leaned forward, pressing our noses against the plastic as the miles we had crossed so laboriously floated by in an effortless procession below.

"We've got a decision to make," I whispered, holding her close.

"Decision?" There was the hint of tears in her voice.

"Will you be coming back to Talador with the fleet?"

She hesitated for a long time, searching my face with her eyes. I knew the answer even before she spoke. Maybe I had known all along and refused to admit it.

"I'm sorry. But I am responsible for bringing your fleet here. I am responsible for talking father into supporting you. It is my doing that we Syllsintaag now suffer the wrath of Veck. How can I desert my people and Clan after making such a mess of things?"

"You are not responsible," I said. "Dal, Jouniel, and I are. We would have found Syllsin without your help and things would have been much the same."

She looked at me, her eyes glistening brightly from the tears that welled up in them. "It would have been better if I had died on the Moon, Duncan."

"Dammit, Felira, I love you and I won't have you talking foolishness!"

I didn't realize I had been yelling until I noticed several grizzled faces pivot in our direction. I clenched my teeth and shut up. Felira sobbed quietly, her face buried in my shoulder, as Rossa-Home appeared over the horizon. In less than ten minutes, we had traveled the same distance that had taken us three agonizing days on foot.

City of Isvall was hovering over the city like a great, steel basketball. Small dark shapes moved back and forth between the flagship and the ground. Other shuttles and landing craft could be seen on the ground with long lines of people making ready to board.

After the last three weeks, the familiar austereness of *Isvall*'s companionways seemed somehow confining and claustrophobic as we made our way toward the center of the great sphere and the main control room.

Dal Corst pushed himself back from the captain's console as we were ushered into the nerve center of the dreadnought.

"So my wayward team has finally decided to come home? For a while there I thought I had lost you."

"You and me both," I said, grinning, returning his pummeling.

"Follow me and we will get you three debriefed," he said, turning to leave by a different hatchway than the one we had entered through. We moved to a cramped conference room a few feet down the passageway, arraying ourselves around a briefing table.

"Where is the ferret?" Dal asked.

"The Marines escorted us to the com-

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puter lab on the way here," Jouniel said. "We handed it over to the Chief Correlationist."

"Begin your report, Team Leader."

Jouniel reported everything that had transpired from the moment we'd left the farm until the raiding party had left the reception. At that point, she turned the narrative over to me. I gave the grisly details of what had happened next. When I had finished detailing Hral Ssaroth's treachery, Dal's face fell into a deep scowl.

"This Baron Ylgost said Ssaroth had commanded the Dalgiri Expedition to Syllsin/Veck? Any chance of his being mistaken?"

"You didn't have to look down the barrel of that beamer," I said. "No mistake."

Dal turned to his intercom. "Irtok."

The speaker came alive instantly. "Here, Dal."

"Have you got the ferret's information copied yet?"

"Copied and distributed to every ship in the fleet per your orders."

"Then prepare a literature search for any mention of the original Dalgiri expedition to the Syllsin/Veck couplet with special attention to references to its high-ranking officers. Give that search a Priority One and then run the one we talked about earlier."

"The search for records of the recent combined Dalgiri/Veckan military operation?" the intercom asked.

"Right. Code name it *Civilization 'X'*. Any report on the location, capabilities, or inhabitants of Civilization 'X'. Use any member of the battle staff you need. I want answers yesterday."

"Acknowledged and understood."

Dal turned to me as the intercom went dead. "Where is Ssaroth's body?"

"Aboard the transport."

Dal pressed the intercom control again.

"Security!"

"At your service, Commander."

"Have you been notified about the traitor Ssaroth?"

"Acknowledged."

"I want his quarters and remains searched *thoroughly*. If there are any clues to who or what he was, I want them. Understood?"

"Understood."

Dal turned back to us. "Anyone think of anything I've forgotten?"

We all gestured our various negatives.

"What is the current tactical situation?" Jouniel asked.

"Stable for the moment," he said. "After we defeated their fleet sent to rescue Rossa-Home Stronghold from Bax Transtas, I sent *City of Ool* and *Zirca* to guard the portal from Veck. That will keep the enemy's home fleet bottled up until we abandon this timeline. Luckily, that secondary portal here on the surface of Syllsin, the one they used to go after Civilization 'X', is closed at the moment. The lunar portal is open, of course, but we know where that leads and they can't strike at us through it. I'm delaying our departure until just before the lunar portal closes in order to cover the Syllsintaag evacuation."

The intercom sounded and Dal turned to it. "Grafftar Transtas sends his compliments and reports that the evacuation is going more slowly than expected. He asks if we can spare a few more boats

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to transport his people to the dispersal points.''

''Give him what you can,'' Dal said. He turned to Felira. ''Do you want to speak to your father?''

''Yes, and join him as soon as possible.''

''I'll have you guided back to the landing bays where a scout shuttle is waiting to take you down.''

Felira got up to leave.

''Wait a minute,'' I said, rising also. ''I'll take you.''

''Let someone else do that,'' Dal said, his manner gruff. ''I need you here.''

''You don't understand. I'm not helping her to the scout. I'm going all the way to the surface with her.''

''When will you be back?'' Dal asked, his eyes suddenly narrowed to two suspicious slits.

''I won't. I'm staying on Syllsin . . .

''. . . permanently.''

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Dal's gaze flicked quickly from me to Felira and back again.

''So that's how it is?''

I nodded.

''I should have known. Jouniel warned me that first day you returned to Jafta that Felira's attraction for you might prove contagious. Have you considered your destiny in making this decision?''

I shook my head. ''It was always your idea that I have a 'destiny', Dal, never mine.''

''I believe you to be a marked man, Duncan MacElroy. You know why. Nothing has happened recently to change my opinion.''

Felira listened to our increasingly heated exchange with growing confusion.

''Would someone mind explaining to me what is going on here?''

Dal gestured toward her with his eyes. ''Tell her.''

So I told her about Jana Dougwaix and the Dalgiri assassination team that had tried to kill us the night I had stumbled into the Dalgiri/Taladoran War. It had been natural to assume they had been after her and that I was just a poor innocent who had gotten in their way. It was something of a shock, therefore, to discover the Dalgiri were time travellers from out of our future and their target had been one Duncan MacElroy, innocent bystander.

''Travel into the past isn't difficult, you know,'' Dal said after I finished my story. ''The basic technique has been known for thousands of years. All that is required is a handy universe where time flows in reverse.''

Jouniel gestured her agreement. ''Of course, it's a bit inconvenient. Retrograde universes are one-way streets into the past. There is no going back.''

Dal 'nodded'. ''That's why we became very interested when we learned that our hereditary enemies had gone to such great lengths to kill one insignificant outtimer. It was only by a fantastic stroke of luck that Duncan survived that encounter. He proved his 'luck' again on the Fyalsorn timeline, and yet again when he just happened to be in the right place at the right time when you crashed on the Moon. He couldn't rescue just any damsel in distress. He had to stum-

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ble across the one—the *only one,* mind you—who could lead us directly to the timeline that had invented the teleportation generator, the one place we most wanted to go!''

Dal paused to catch his breath. I opened my mouth to say something, and then closed it again. I ran over the things that had happened to me in the past four years in my mind. Dal was right. If I hadn't lived them, I wouldn't believe them in a million years.

''What I am trying to say, Felira Transtas,'' Dal continued, ''is that Duncan's future is predestined until the day he succeeds in whatever it is that will one day cause a Dalgiri assassination squad to be dispatched into the past to kill him. It is for this reason that I know his destiny lies with Talador. When the fleet leaves Syllsin, Duncan will leave with it. He has no choice in the matter.

''I am sorry for you both, but you must realize that the fates are not always kind to those they have taken for their own.''

The tension in the briefing room had risen until it was almost a palpable presence in the air. Sensing that positions were hardening until there would be no backing down, Dal abruptly changed his tack. One instant he was red in the face, his justifiably famous temper barely under control; the next he was cool as a cucumber and all cheek-to-cheek smile.

''Look, even if I'm wrong, the least you two can do is stay until the day is over. How about it, Felira? I need Duncan's help in unravelling this Hral Ssaroth disaster. Surely you can wait until nightfall to see your father.''

Dal didn't fool either of us. He obviously hoped that I would change my mind about staying on Syllsin, or barring that, that Felira would. I could see Felira hesitate and was about to tell Dal what he could do with his offer when she graciously agreed to his terms. Calm settled over the briefing room after that, lasting through lunch. Qoth Eyb, *Isvall*'s Security Chief, showed up during the meal with a report on his search of Ssaroth's quarters and remains.

Eyb had subjected Ssaroth's body to a full micro-scan, a procedure which quickly detected what turned out to be a nerve-activated communicator/recorder no bigger than the head of a pin. It had been surgically implanted just behind Ssaroth's eardrum and could hear any sound its host could.

As it turned out, it was also a major stroke of luck for our side.

''When we finally cracked the damned thing's security code,'' Eyb said, continuing his report, ''we discovered Ssaroth had kept a detailed log of his activities in it, almost a daily diary.''

Then had come the first bombshell.

Hral Ssaroth, it seemed, like the Dalgiri assassination squad before him, had been an interloper from out of time. His mission had been to guide the here-and-now Dalgiri to the Syllsin/Veck timeline couplet. The logical assumption was that the future Dalgiri were attempting to give their earlier selves a jump on the Taladorans as far as the teleportation generator was concerned. The logical assumption turned out to be wrong. Ssaroth's journal made it clear that he had been as surprised as anyone when Syllsin turned out to be the source of that miraculous machine.

About this time Irtok checked in with

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a second intellectual hand grenade, garnered this time from the ferret's memory banks.

Ssaroth wasn't the only refugee from the future in all of this. According to the Veckan data banks, their ancestors were refugees from the same future Dalgiri Empire that had produced Ssaroth. Like him, they had made a beeline for the Syllsin/Veck timeline couplet.

No wonder Talador had never heard of them. They wouldn't come into being for the better part of half a century yet!

The conclusion was inescapable. The Syllsin/Veck couplet was the common denominator in all of this. It was important to the Dalgiri, important enough that they would one day go to heroic lengths to colonize it centuries before their own time.

Dal looked up from the reader screen where he had been scanning Eyb's report for perhaps the third time. He glanced at Jouniel and frowned. Unlike the rest of us, she appeared neither confused nor worried.

"You aren't surprised to discover Ssaroth and the Vecka are from our future, are you, Jouniel?" Dal asked.

"Not true. I was . . . what is Duncan's expression for it? . . . flabbergasted. However, it does fit rather nicely with a theory of mine."

"Which is?"

She looked at each of us in turn, pausing for dramatic effect.

"It seems to me we may soon have adversaries far more powerful than the Dalgiri to worry about. And there is a good chance they won't be human beings!"

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The only sound in the briefing room was the quiet hum of *Isvall* herself.

"Would you care to explain that comment?" Dal asked in a deceptively mild voice.

Jouniel 'nodded'. "Look around you. This timeline is absolutely unique. The lifeforms are unlike any we have ever seen before. Now it's true that most species tend to be replicated endlessly throughout paratime and there seems to be a mechanism we don't understand which acts to cross-pollinate the universes. Who knows, maybe temporal portals are really weak spots in the continuum and living things occasionally fall through the break. Whatever the cause, knowing that we can expect to find humans, cats, dogs, roses, redwoods, even cockroaches . . . especially cockroaches . . . all over paratime shouldn't blind us to the knowledge that these aren't all the possibilities there are.

"And then there is the fact that some alternate Earths are relatively sterile places with only a few thousand genera, while others have millions. And which lines have the most variety?"

"The skewlines," I said, remembering the surprise I'd felt upon learning that Europo-American is a veritable zoo compared to most. We have twice the number of species that Talador does.

"Duncan's right," Jouniel said, 'nodding'. "But why the skewlines and not the core universes? Simple, really. The timelines in a cluster core have very stable portals. Cross-pollination goes on all the time and local evolutionary differences tend to damp out quickly. The

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skewlines, however, wander in and out of contact with many different universes, infecting (and being infected by) each in turn. What of Syllsin with its potpourri of plants and animals, easily the most extreme case we have yet discovered?

"This line has been fertilized by a vast number of universes over the last billion years. The variation is so great, in fact, that the evidence points to this timeline being on the boundary between our own macro-cluster and some other."

Dal looked skeptical. "The discovery of a few hitherto unknown species isn't much to build an entire next higher order of paratime structure from."

Jouniel laughed. "The oddities in the local flora and fauna are merely what got me thinking about the whole subject. Duncan, tell Dal what you discovered last night while on guard duty."

"Huh?" I asked.

"The stars."

"Oh, the stars! They aren't where they are supposed to be."

Dal looked as though I had stabbed him.

Jouniel smiled. "When was the last time we discovered a timeline where the heavens were out of place?"

"Never."

"Yet logic says the pattern should be completely random from universe to universe. Why should the sun, the stars, even the farthest galaxies always be in the same relative positions all across paratime?"

"I've never thought about it."

"None of us have. Yet it is a puzzle every bit as perplexing as the replication of lifeforms. Something causes each universe to be a near duplicate of its neighbors. But what if the effect is purely local? In that event, isn't it logical to assume that any universe from beyond our local macro-cluster could have different constellations in its sky?"

"*And Syllsin does!*" I said.

"Proving that this timeline is from somewhere else. The Syllsintaag seem to have come here in the relatively recent past. What little archeology they have done puts the earliest traces of humanity on this world about fifty thousand years ago. Syllsin is a skewline that has wandered out of its own macro-cluster and into ours."

"Then Civilization 'X' isn't in our timeline cluster at all, and the future Dalgiri launched their operations into the past because this universe is the gateway to that other cluster," Dal said

"Probably," Jouniel agreed.

"And we Taladorans will have to explore the new macro-cluster because we don't dare remain ignorant of what is beyond our own cluster."

"I don't see any way out of it," Jouniel said, 'nodding'. "Only, when we send our ships through into the new cluster, we'd better caution them about what to expect.

"Let's never forget that *Homo sapiens* may be a strictly local phenomenon, too."

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"From: Commander, Syllsin expedition. To: The Ruling Council. Message begins: Have decided to defend this timeline against heavy force of Veckan and possibly Dalgiri warships. Imperative that a rescue expedition be dis-

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patched as soon as a secure series of transitions from Talador to Syllsin can be surveyed. Will dispatch courier shuttle with information so far obtained and full report. Message Ends. Signed: Dal Corst, Commanding."

If anyone ever writes a definitive history of the brief and brutal Syllsin/Veck war, they will probably split it into two independent parts. That was essentially the way we fought it. The Taladoran fleet had more than it could handle defending the portal from Veck, leaving the Syllsintaag pretty much on their own to mop up the surprisingly strong resistance put together by the surviving Veckan governors.

The two campaigns couldn't have been more different.

The fleet action began within hours of Dal's decision to stay. The whole of the Veckan navy seemed to be lined up on the other side of the portal, each ship eager to get their crack at us. Luckily for us, the nature of temporal portals is such that no matter how big the enemy fleet, they still had to come through in single file like a row of ducks in a shooting gallery.

Not that we got away without cost to our side. One of the hundred or so vessels destroyed in the first week's fighting was Taladoran Cruiser *Kreshni*, the victim of a lucky shot—a Golden BB in the parlance of my homeland.

Next to the possibility that we would be swept aside by an overwhelming force at the primary portal, our biggest worry—and the cause of many sleepless nights—was what to do when the portal to Civilization 'X' reopened in the spring.

Somewhere beyond that portal was an immensely powerful civilization, possibly alien, almost surely mad as hell at the Dalgiri. If they had traced the Dalgiri back to Syllsin, we could easily find ourselves hip deep in aliens intent on exterminating any human they could get their tentacles on.

So on the morning the temporal energy flow shifted between universes and the Syllsin/Civilization 'X' portal reopened for business, our small fleet was poised for battle. Apparently the superbeings beyond the gate were either still preparing, or not as mad as we thought.

It wasn't long afterwards that the Vecka calculated their losses, and decided they had had enough.

The Veckan ground forces did likewise, having been beaten in a series of pitched battles with Bax Transtas's Army of Free Syllsin until they found themselves with their backs to the sea in a barren corner of the Aylthern Continent. They surrendered with much spirited haggling over terms—but only after seeing the hulking form of *City of Ool* hovering over their positions, ready to rain fire down around their heads.

Two weeks later the Syllsin lunar portal reopened and a hundred Taladoran ships poured through to relieve our beleaguered fleet.

22

The soft night breeze wafted gently across the rooftop garden, bringing with it the scent of roses, jasmine, and the pungent aroma of a small white flower that has no duplicate anywhere across paratime. Felira and I sat amid the

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greenery and looked out across the glittering lights of Transtas Keep as a gibbous moon climbed the eastern sky.

I took Felira into my arms, pulled her to me and sought her lips with mine. Afterwards, we snuggled close, enjoying each other's warmth in wordless communion.

Finally, I took a deep breath and popped the question.

"Will you marry me?"

She gasped, thrust me away to arm's length, and studied my face with serious eyes.

"Are you sure you want me to?"

"Of course. Why wouldn't I?"

"What if your destiny has no place in it for me?"

I sighed. "Look, love-of-my-life. If I didn't want to marry you, I wouldn't have asked. And as for my so-called destiny. . . ." I made a rude noise, one that is the Syllsintaag equivalent of a popular four-letter word back home.

"Dal has searched both the information in the ferret and in Hral Ssaroth's communicator," I continued. "He has yet to find a single mention of me. Hell, for all we know, that near-man assassination team attacked the wrong person four years ago. It was probably all a giant mistake.

"In any event, mistake or no, I still want to marry you."

Felira searched my eyes for a few seconds more before throwing her arms about my neck.

"Then, I accept!"

We sealed the bargain with a kiss . . . with several in fact. Finally, when the world had ceased to spin around us and I had begun to notice my surroundings once more, Felira broke the embrace.

"We should immediately ask Father for his blessing as Law Giver of Transtas Sept so the banns can be posted. I'm sure he will give us dispensation from the normal waiting period so we can have the ceremony before *City of Isvall* leaves for Jafta."

I smiled. "You go ahead. I'll be down shortly. A man in love has a few physiological reactions that need time to subside before he greets his future father-in-law."

She kissed me again, this time lightly on the cheek. "Hurry as soon as you can."

With that, she was gone, and I was left alone to gaze out over the city and think. Felira had touched on a subject that had been bothering me, and I wanted time to put my emotions in order before joining the celebration downstairs.

What if Dal was right, and everything that had happened to me since I joined the Time Watch had been preordained by fate?

Even the remote possibility scared me spitless. I enjoyed the freedom that comes from being one of history's nameless throng. In obscurity there is comfort.

Yet I have to admit that there is more than a little evidence to support Dal's opinion. For instance, just what *were* the chances of my stumbling across Jana Dougwaix on the very night the Dalgiri goon squad tried to cash in my life insurance policy? Or later on the Fyalsorn timeline. What was the likelihood of our stumbling across the one Dalgiri base in all of paratime where we could cap-

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ture an operating teleportation generator intact? And then, after we had begun to search for the people who invented the generator, only the wildest stroke of luck had led Jana and me to that cave on the Moon before Felira's oxygen ran out.

Just how far can the concept of coincidence be pushed before it loses all meaning?

So after a week of tossing and turning and getting dark bags under my eyes, I did what any sane person does when faced with insufficient data. I decided to ignore the problem and hope it would go away. In the meantime, I planned to take things as they came. Life is too short to worry yourself into an early grave over something you have no control over.

And Number One on my agenda of taking things as they came was proposing to Felira. After the wedding, I planned to show her the sights of the Confederation, possibly even stopping on Europo-American if I could talk the Time Watch into allowing it.

Afterwards there would be all of the rest of paratime to discover, starting with the enigmatic Civilization 'X'. Dal's timetable for the first reconnaissance in force was almost exactly one year from the day our rescuers burst from the Syllsin lunar portal. Dal had already hinted that there would be a place for me if I wanted it (in my usual capacity of 'rabbit's foot', no doubt). I planned to take him up on the offer. Who knows, I might surprise him and actually do something useful.

For if one thing is as clear as the nose on Dal's face, it's that the inhabitants of Civilization 'X' are too dangerous to

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be our enemies. Alien or human, man or beast, they would have to be won over as friends if Talador was not to find itself embroiled in another thousand-year war.

Luckily, the Taladorans were much more capable of making friends than they had been even a few years ago. If the continuing crises that had beset them of late taught them anything, it was to be a bit more tolerant of people with other ways than their own. First there had been Europo-American, which taught Talador that the stars are more than just pretty lights in the sky; and then Syllsin, with its teleportation generator.

Of course, no radical change ever comes about in the affairs of men without a few rough edges on it. I had noted a tendency of some in the Ruling Council to ride roughshod over other cultures still, but at least they were trying. It would be my job in the years ahead to keep nudging them in the right direction.

And if civilized relations could be established with an alien species such as that reputed to inhabit Civilization 'X', why not with the strain of humanity that ruled the Dalgiri Empire? Nowhere is it written that Neanderthaler and Cro Magnon must be forever locked in mortal combat. The example of the Aazmoran Timeline is proof of that.

Maybe it was my destiny to bring an end to the Great Paratime War. At least it was nice to think about. One of my prime concerns ever since joining the Time Watch had been to protect Europo-American from the depredations—unintentional or otherwise—of both sides. What better way to protect those I left behind than by ending the war altogether? And it wasn't too hard to imagine the future Dalgiri out to kill me were members of a 'war faction' irritated by the coming of peace.

Only time would tell. And if my future was still shrouded in mystery (as is right and proper), I was fairly sure of one thing. Whatever lay ahead, my life wasn't going to be a dull one.

I took a deep breath and got to my feet, turning to enter the lift that would take me to my bride. A warm glow washed over me as a stray thought popped into existence in my brain.

It had just occurred to me that somewhere out there in the infinity of universes that is paratime are people who have traveled to the stars.

All we had to do was find them.

When do we leave? ■

JAMES H. SCHMITZ, 1911-1981

● James H. Schmitz, an author well known and long admired by readers of *Astounding* and *Analog*, died April 18 after several weeks in a Los Angeles-area hospital. Born in Germany of American parents, he first published in *Unknown* in 1943 and began appearing regularly in *Astounding* in 1949. His contributions, often distinguished by strong female protagonists, continued into the '70s and included such stories as the Agent of Vega and Telzey series and "The Witches of Karres," later expanded to a novel.

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G. Harry Stine

INDUSTRY LOOKS AT SPACE

Why aren't American industries rushing into space? Ask the man who owns one...

Suppose you are the chief executive officer of a multi-million-dollar Fortune 500 company making industrially oriented products. Suppose that you have been presented with an opportunity to get in on the ground floor with entirely new industrial processes leading to products that have never been made before. You will be able to obtain basic patent protection. Nobody else will have these processes, and nobody else will be able to duplicate your new products. The potential new products will do things that have never been done before or will do existing things better at a lower cost. The potential market looks like it will amount to *billions* of dollars per year within twenty years.

However, it's going to take perhaps as long as ten years before you will be able to get these products to the marketplace. It is going to cost a great deal of money up front for the development and perfection of the new processes to make the new products. It may be as long as fifteen years before you reach the breakeven point where profits from the new products begin to pay back the capital you've had to sink into the development phases. And there is a 50-50 chance that some of the new processes won't work, although you might become aware of this soon after your development people began work on them.

What are you going to do?

Are you going to take money out of the profits currently made by your existing product lines, money that would eventually go to your stockholders as a dividend, a return on their investment? If so, how much? Will the board of directors back your decision to do so? Will the stockholders?

You will be retiring from the company in less than ten years because it has already taken you twenty-five years to climb to the top executive position in the firm. You will not be working for the company when the new products made from the new processes get into the marketplace.

The above situation represents some mundane everyday executive problems that have to be faced and solved by corporate presidents, but it goes beyond that.

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It is also the situation in which corporate executive officers now find themselves when it comes to space industrialization—the utilization of the environment of space around the Earth for the manufacture of new and better products for people on Earth.

For over a decade scientists have been studying and experimenting with the unique characteristics of space which they believe will be useful and profitable for the manufacture of new materials ranging from improved crystals for integrated electronic circuits to new and improved pharmaceutical items such as vaccines and isoenzymes. These unique space characteristics are the absence of gravity force (weightlessness) and high vacuum, both available to anyone in space by simply being there. Experiments have been conducted on the Apollo lunar flights, in the Skylab, and on the Apollo-Soyuz flight of 1975. Other experiments have been conducted during brief flights of rockets, providing a few minutes of weightlessness during their flights above the atmosphere.

The results of these experiments look very promising.

More than 44 industrial processes that can be used in space have been identified by people at NASA's George C. Marshall Space Flight Center in Huntsville, Alabama. A recent study has identified 147 products that could be made (a) only in space or (b) made better in space than on Earth. The total market for only 10 of these space products has been forecast to be more than $3 billion per year ten years in the future and $10 billion per year twenty years from now. Some of these products include new bearing materials, new machine cutting tools of greater hardness which means greater machine speeds and faster production rates, superconducting electrical materials, semiconductor electronic materials, fiber optics of greatly improved quality, super magnets that promise to reduce the size and improve the energy efficiency of electric motors, and even such unforeseen products as jewelry made from space-made materials that are very rare, easily identified, and therefore valuable possessions.

This all looked so promising to the Soviet Union, which manages to get copies of the NASA reports and studies as well as anyone else who wants them, that the Soviets have forged ahead and have been utilizing their small space station, *Salyut*-6. This space station is much smaller than was the U.S. Skylab, but *Salyut*-6 is still up there, having served as home in space for several crews of cosmonauts for as long as six months at a time. The Soviets have been using their smaller space station for the manufacture of new metal alloys and pharmaceuticals. Quite naturally, the Soviets are not telling all that their cosmonauts discovered about making things in space. Macy's doesn't tell Gimbel's. Soviet industry now has some new materials; they aren't telling anybody what these are; and they may eventually lead to a Soviet economic advantage in the world marketplace. Because the U.S. has decided that a space program isn't as important as social programs, we have abrogated our lead in space technology to the Soviets, who are *not* making the same mistake they made with

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Sputnik in 1957. The Soviets are being very quiet this time, having learned their lesson about awakening the "sleeping giant" of America in the old space race to the Moon. At the moment the Soviet Union is about five years ahead of the United States in space industrialization.

Why? American industrialists must have been aware of the same basic facts that are available to Soviet industrialists. Why haven't American industrialists moved vigorously into the space industrial arena? Why isn't American industry taking advantage of the opportunities available to them with the NASA Space Shuttle, opportunities that can put their companies on the road to totally new products in areas of high technology?

The best way to answer these questions was to ask American industrialists directly . . . and this is exactly what was done by a team of consultants that included the author. Under a contract with NASA, this team went out to people in a wide variety of American companies both large and small. They made presentations on the potential of space processing to individuals in these firms. And then they listened to what American industrialists had to say.

And the reasons why American industry isn't beating a path to the doors of NASA became abundantly obvious and perfectly understandable, even if they were a bit shocking in light of American industry's legendary ability to move rapidly into areas of new technology.

It seems that most American companies have been suffering from too much of too many things.

They are laboring under an extreme burden of government restrictions that include the IRS basically telling companies how to run their operations, OSHA regulations that can determine the guilt or innocence of a regulatory violation by bureaucratic fiat, and a plethora of government rules and regulations regarding the environment, transportation and shipping, product liability, warranties, advertising, and where thermostats must be set.

American industry is also the victim of its own success. Why look for new products in a high-risk, capital-intensive, far-out area when today's product lines are turning a decent profit in spite of government regulation? When you're just getting a company started on a shoestring and making it grow by bootstrapping, you haven't got the money to shoot craps in high-risk areas. When you've got the company running along fine, why rock the boat and offend the stockholders by taking a flyer on a high-risk, capital-intensive new area?

The path to the top of the executive ladder in American industry today is smoother and better paved if a person has an MBA. That graduate degree in business administration gets you to the top quicker. As a result, a lot of American companies have organizations whose top layers are studded with MBAs. The things taught in business schools include caution, careful evaluation of risks, cost-effectiveness studies, and parsimony. When it comes to new technology, American industry has discovered a successful technique: the Harvard Business School Syndrome. This HBS Syndrome is very simple and very ef-

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fective: Do not develop new technology; buy it instead. Wait until somebody, working in his garage or basement, develops something new, takes all the risks, mortgages everything he owns to provide the risk capital required, and works for ten years to develop the product *and* the market. Then step in and buy the whole schmear. The people involved in the small acquired company come out of the deal with enough money to allow them to recoup their initial investment plus enough to set themselves up for life; the big acquiring company gets new technology without high risk. All it takes is money. Of course, the big company has its internal R&D operation, but this activity is primarily targeted toward improvements in manufacture and performance of existing product lines . . . *not* totally new technology.

(Obviously, there are exceptions to all of the above, because American industry is such a large system that one cannot generalize about it. There are some outstanding examples of executive cleverness in circumventing government restrictions, in risk-taking, and in development of totally new product lines. But unfortunately there aren't enough exceptions.)

There is also far too much misunderstanding about American industry. Part of this is due to the general left-leaning stance of American education, and part of it is due to American industry's fantastic ability to sell product and total inability to sell itself! American industrialists know what they're doing, but neither they nor their public affairs departments, consultants, or firms can manage to get the message across to the general public. Part of this is the problem with the news media, which also leans slightly to the left of center and do not really seem to know or care that they are biting the hand that is feeding them. Part of this is also due to American industry's willingness to let its hand be repeatedly bitten. . . . This misunderstanding of basic American industry unfortunately extends into the ranks of NASA, which is trying hard—but not succeeding—in selling space industrialization to American industry, because NASA is going about it in the wrong ways. (Again, there are exceptions to this general statement. Some very savvy people in NASA *have* managed to sell the NASA space transportation service to a surprising number of firms—surprising considering the restraints under which these enterprising NASA people must operate and the basic ignorance of industrial philosophy exhibited by the scientist hierarchy of NASA top-level management.)

These have been some pretty strong statements and, as some people will believe, an indictment of whichever side of the fence they consider the villains to be on. But these statements have come as a result not only of some twenty years' direct experience with American industry by the author, but also from attempting to work with American industry in getting involved in space industrialization since 1975. And they come from direct contact with over a dozen individuals in top-level management, finance, planning, product development, and industrial engineering in order to get in-depth reactions to

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American industry's thoughts about space industrialization.

The results of these direct contacts were surprising but served to confirm the early evaluations.

Who are these people? In typical fashion, every one of them said, "Look, I am *not* speaking for my company here, and what I tell you does not reflect company plans or policies in the space industrialization area. And I must ask you to keep my name confidential." This was to be expected. You *never* let your competitors know that you are interested in a new area with potentially large revenues and products that will threaten the competitors! Also, you *do not* speak to anybody outside the company without explicit permission to do so and without everything you say being approved beforehand. Finally, anybody connected with American industry wants to see his name appear in public only in the business section of the newspaper where his promotion is announced . . . or on approved speeches or papers delivered before responsible groups, associations, or technical societies.

In almost *all* cases, nobody in the domestic industrial world was aware of the potential of the NASA Space Shuttle, NASA's activities in space industrialization, or the availability of opportunities to conduct industrial research activities in space aboard the NASA Space Shuttle. The whole subject of space industrialization was perceived as something that might take place in the 21st century. The visionary planning of NASA and some space colonization groups—concerning extraterrestrial mining, space energy, space habitation and space colonization—simply turned off American industrialists when it came to the near-term realities of space industrialization. They consider anything in space as being "far-out Buck Rogers stuff." And that is a direct quote from *several* of these industrial contacts!

Once they were made aware of the NASA Space Shuttle and the potential for space industrialization that had emerged from many studies and experiments, these industrial contacts provided some very valuable inputs.

Extensive as the experiments and studies have been, the industrialists all thought that the work was too shallow to provide a data base upon which to make a decision to become involved. One person pointed out that there wasn't a one of the proposed products of space industry that would survive the rigors of a typical corporate planning review to which all new concepts, ideas, and product possibilities are subjected. These planning reviews are extensive and done in considerable depth. Furthermore, they are "reiterative"—i.e., once passed through the review chain from top to bottom or vice versa, they are sent back through the review chain for additional comments or data, then back through the whole review system again . . . and again . . . and again . . . until it becomes patently obvious that either the company should proceed with it . . . or just drop the whole matter.

There were a number of specific comments that included:

1. The proposed products from space industrial activities seemed too poorly

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defined, therefore:

2. The markets for the products appeared to be too indefinite and could not be subjected to the rigorous evaluation that must precede the introduction of any new product into the marketplace.

3. Some terrestrial alternatives—ways of doing the same or similar things on Earth—appeared to be cheaper in light of perceived space transportation costs, which were viewed as being too high by a factor of ten to a hundred times. (NASA is selling Space Shuttle payloads for about $323 per pound in 1978 dollars. One contact said his current product, which was quite satisfactory, left the shipping dock on its way to the customer at a total cost of under $2 per pound!)

4. The experimental data available from tests thus far conducted were "too soft" for industrial use, meaning that the findings were too theoretical and too basically fundamental to reveal solid products and permit product developers and production engineers to get firm grips on costs.

5. Many of the things taken for granted by space industry advocates were believed to be highly theoretical and mostly unsubstantiated—although those who made this comment also admitted knowing little about what had really been accomplished in space industrial experimentation to date.

6. The risks involved, even to determine product feasibility, were far too large in relationship to the capital outlay required. In other words, it costs far too much to find out if you are right or wrong.

7. The return-on-investment times were too long. Only the very largest multinational corporations can consider return-on-investment (ROI) times as long as 10 to 15 years. The average company, its board of directors, and its stockholders expect an ROI of 5 years or less. The author knows of one large firm which will not consider a new product unless it can be expected to show a profit within *one year* of development go-ahead.

These specific comments were not totally unexpected by members of the study team who had had any experience at all with domestic industry and who understood some of the "too much" problems we spoke of earlier. However, these beliefs and perceptions of industrialists can change literally overnight, and this has happened many times in the past. With regard to space industrialization, it will happen once some company makes a profit with a space-manufactured product!

It has even happened in space already. Before the Communications Satellite Corporation (COMSAT) was formed by Act of Congress in 1964, space communications advocates such as author Arthur C. Clarke and Bell Labs scientist Dr. John R. Pierce knew full well that the technology was in place and that it could be done. Furthermore, they believed that it would provide a service of value and would therefore make a profit, even in the highly regulated communications industry. It took seven years for COMSAT to pay its first dividend of 12 cents per share to its stockholders. Now AT&T, Western Union, IBM, ITT, and other corporations are ready, willing,

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and able to get into it; in fact, they want into the game in the worst way! In 1978 more than half of the world's communications was handled by satellites, and gross revenues exceeded a billion dollars. Time frame: 14 years from the launch of the first commercial communications satellite, "Early Bird."

Therefore, one cannot blame those industrialists who were surveyed for saying that the prospects for space manufacturing looked "interesting" and, now that they knew a little bit more about it, they wanted to see more data and be kept informed of progress. And every one of them said that their companies would probably get involved if their competitors did!

But the high risk still bothers them. They said they would like to see an appropriate risk-reducing or risk-sharing policy from the federal government, and that they believed that such a policy would greatly spur interest and involvement from nearly all segments of domestic industry. There is historic precedence for such a policy, by the way: beginning with the establishment of the Patent Office and the government-backed expedition of Lewis and Clark, there has been a continuing relationship of risk-reduction involving the federal government and domestic industry. In 1979 there were two bills before Congress to do exactly this. Representative Don Fuqua of Florida introduced H.R. 2337, which would set up the Space Industrialization Corporation to provide grants and loans to companies interested in participation in space industrialization. Senator Harrison H. Schmitt, the only U.S. Senator to have walked on the surface of the Moon, introduced similar legislation jointly with Senator Adlai Stevenson, Jr.

But the big problem seems to be that NASA has all the existing data and also runs the trolley car to orbit, the Space Shuttle. And there is a communications barrier that exists between NASA (or any government agency, for that matter) and domestic industry. In short, they do not speak the same language, and therefore they look at things from different perspectives with different priorities. One industrialist put it very bluntly: "NASA has a service to sell: transportation to Earth orbit and facilities once they get you there. Every one of our salesmen learns to speak the language of the customer, to find out what the customer's needs and problems are, and to think like the customer thinks. If NASA is going to sell to American industry, NASA must learn how to *sell!*" And it was the general consensus that NASA efforts along this line have been very amateurish to date . . . an opinion which is to be expected from executives who are very sales- and market-oriented and therefore extremely sophisticated in such matters!

However, we shouldn't put the entire blame on NASA for this situation. Only part of the fault lies with the space agency, because it is having the devil's own time trying to break away from the practices it worked out during the halcyon days of the Apollo Program. It still speaks of scientific research and exploration and touts the technical "spin-offs" of the space program that have become commonplace items in our daily lives. But it should be speaking of the

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hard bottom-line of how to make a buck by doing things in space. Part of the fault also lies with the news media, because they too, are still stuck in the Apollo legacy, reporting with the outdated slant of the scientific exploration of space and generally ignoring the huge potential of space industrialization.

What are the answers? How does one go about overcoming the immense barriers of ignorance, distorted perception, lack of communication, lack of empathy, reluctance to engage in risky crapshooting in new areas, the high costs involved, and all the rest?

The answer does not include billions of dollars more for a space program. That game has been played to its conclusion. And that does not mean that the government should get out of the space business . . . at least, not yet, not as long as high risk remains. It may take years to get Congress to adopt risk-relief or risk-sharing measures to encourage industrial participation in space. Even once past Congress, such measures, even if adopted *this year*, would still face an administration which, at this writing, is at total odds with Congress on this matter. (The attitudes of the new administration remain to be seen.) Even if Congress passed the finest legislation possible, the administration could drag its heels for several years. We may not have several years.

Yes, we have played out the game of "Beat the Russians." We did it and won the race to the Moon in 1969. We may have to play a similar game again because, in 1979, the Russians are ahead of us in the field of space industrialization. This reality will eventually show up in the international marketplace.

Then we will have competition.

Then American industry will have to respond to the competition or end up playing second fiddle, a situation which will impact sales . . . which is disastrous to executives, directors, and stockholders alike and which is, in the long run, disastrous to John Q. Public as well. Americans do not like to run second, and neither do American companies; each wants to be first in its own marketplace.

An anonymous American business executive—remember, they do not like to see their names in public print—said recently, "Never underestimate the American response to a business challenge."

And on August 22, 1977, the editors of *Business Week* magazine observed, "The main characteristic of American industrial strength has long been its eagerness to hone its technological edge."

The challenge is coming—if not from the Soviets, then from the Japanese or the Europeans, who have already seen the potential in space industrialization and have committed themselves to it. We will not have to wait very long. And when it happens, the business executives whose comments were discussed here will have been highly justified in asking that their identities be kept confidential. After all, who wants to be grouped with the British Astronomer Royal, Sir Richard Van Der Reet Wooley, a man remembered forevermore for his classic statement, "Space travel is utter bilge!"

He forgot that one person's bilge is another person's treasure. ■

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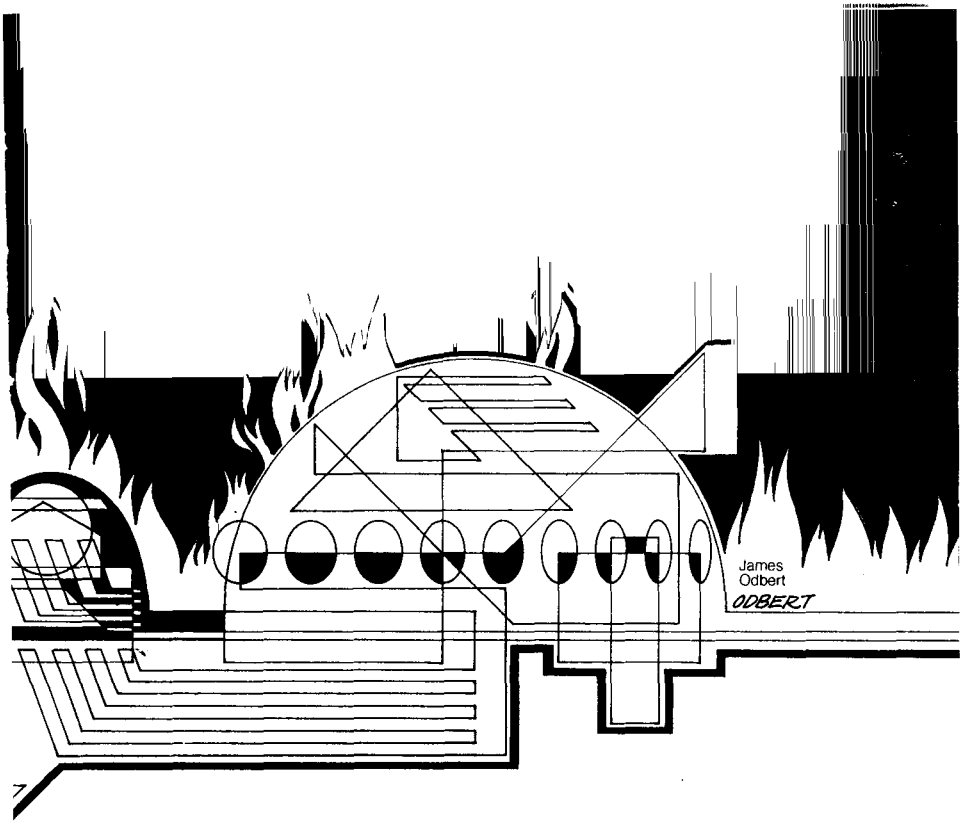

Ron Goulart

MERCY

Troubleshooting can be
tricky business—especially
when the gadget
being troubleshot
(a) is not supposed to
need troubleshooting,
and (b) has a mind of its own.

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The beautiful auburn-haired young woman punched out a landing pattern on the control panel of the skycar. "You look absolutely *dreadful*," she remarked.

"I'm supposed to," Dave Ireland said, his head resting against a plaz viewport of the rapidly dropping cabin. "Otherwise they won't admit me down there."

The skycar fell through darkness and swirling snow. It made a thumping, sluicing landing atop the docking area of a vast glaz dome.

"Sorry, sorry about the *terrible* setdown," said Berkley Medford as she unfastened her safety straps. "You'd think, being sole heiress to the Medtex Corporation, I could handle gadgets better than . . . Dave, are you *okay*?"

Ireland was leaning far over in his seat, hands pressed flat on his knees, breathing slowly through his open mouth. "Little dizzy is all," he managed to say.

She placed a cool, tanned hand to his perspiring forehead. "You're absolutely burning up. I don't see *why* they gave you something as awful as Factory Virus 26 instead of—"

"Berkley, I have to be suffering from a fairly serious malady or I can't get into the Industrial Disease Wing of New England General Hospital at all."

"But to have to *feel* so gunky, to go around with a temp of 102, to—"

"It's 104," he corrected. "Now, help me get myself and my gear into a receiving tube."

She slid her hand under his elbow, took his wrist with her other hand and tugged him to his feet. "You smell just dreadful, too."

"A side effect."

She frowned. "I'm really worried you're going to—"

"Only 7 percent of the FV26 victims ever succumb."

"But you could very well be one of them." Leaving him swaying in the narrow aisle of the docked sycar, Berkley moved to a wall locker to pull out his sewdohide suitcase. "Listen to this darn thing jingle. They're *surely* going to tumble that you're smuggling tools and replacement parts in the hidden comp—"

"That's my beardep kit, electrodent brush and deode spraygun you hear rattling around." He lurched, caught the suitcase out of her hand.

Putting her palm to his chest, gently, she asked, "Why couldn't you simply *pretend* to be sick?"

"Your father explained that, the security people explained it, even my boss in Tech Troubleshooting explained it," he replied, wiping at his blazing forehead with his free hand. "Everyone down there has to be convinced I am nothing more than a legit patient. We don't want New England General, or any of Medtex's other customers, to suspect our new Mercy model android nurses may have a potential for malfunctioning."

"Potential for malfunctioning?" She shook her pretty head, red hair flashing. "You're, *honestly*, starting to sound like all those nitwits in Public Relations. These screwed up andies have the potential for *killing* patients. In fact, one or more of them has already, quite probably, done that right here at NE General."

"Whoa now," he cautioned as he moved, carefully, toward the exit hole.

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"Nobody at this damn hospital so much as suspects any such thing, Berkley. But when we started to worry that the new design 2B Compassion Tubes in these newest Mercys might be defective, we had our own computer tap in on the hospital files and we found a few recent deaths which just might—"

"A few recent *murders*. And just take a look down inside the dome." She pointed at the seethru floor panel beneath her booted foot. "One whole wing of the hospital is nothing but ashes and unsightly rubble."

"Nobody's even hinted that a Mercy android could be that goofy." Very gingerly, so as not to make himself any woozier, Ireland knelt and tried to open the escape hatch. "We're not certain that even one of the Mercys is at all—"

"Here, I'll do that." She nudged him gently aside with one lean hip. "Just look at yourself, Dave, weak as a kitten and you can't even open a simple little door. Honestly, to allow those nurts at Dad's experimental lab to shoot you full of deadly virus simply so you can sneak into this dumb hospital to spy on—"

"It isn't deadly. I'm not a spy. All we intend to—"

"You keep saying *we* all the time. As if you and Medtex were one and—"

"I am engaged to you," he said. "You are the only daughter of H.D. Medford, president and founder of the largest medical robot and android manufacturing setup in the world. I also happen to work for Medtex, in a capacity—"

"Aha, I see it now," she said, hands on hips. "You still don't believe I love you with no strings. You're only doing this to prove that—"

"Quit talking like one of our . . . like one of Medtex's psychobots," he suggested, lowering his legs over the edge of the opening in the skycar's belly. "I'm doing this because I work in the Tech Department and it's a job that has to be done."

"No, it *isn't*." She knelt on one lovely knee beside him. "All father really has to do is issue a statement to the dozen or so hospitals who've purchased the new Mercy nurses. He tells them Medtex suspects a defect which may cause the andies to—"

"Sure, and then the media of the world announce that Medtex has been building killer robots," he said. "So far this latest model Mercy is in seventeen hospitals. There are at least five in each of the hospitals and we sure don't want to have to recall all those—"

"I really *would* respect you just as much if you didn't do this."

"I know," he said and let himself drop through the hole and into one of the dome-covered hospital's receiving chutes.

"I don't feel much better," said Ireland, truthfully. "The fever is still raging, I feel like I'm doing somersaults every time I attempt to stand . . . and for the past half hour I've been hallucinating that Old Boston is burning down."

Dr. Grossel nodded while he patted at the tunic of his two-piece white medsuit. "That's nothing to worry about," he said in his deep handsome voice. "Old Boston is burning down."

Sitting up, with difficulty, Ireland said, "Hum?"

The one-way seethru wall of his pri-

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vate cube showed a stretch of the old city outside the protective dome. Several blocks of brownstones were breathing fire up into the snowfilled twilight.

"Ethnik wars. They're always torching something," explained Dr. Grossel, still frisking himself. "Where the hell did I put that darn thermometer?"

"You already took my temperature, if that's why you want it."

"Did I?" He blinked his skyblue eyes. "Remember, by any chance, what it was?"

"104, same as it was when I checked in here last night."

Nodding, the physician brought his wristdik up near his mouth. "Let me . . . ow! Keep doing that. Misjudging the distance and whacking myself in the chops with this damn dictating gadget. Ahum . . . Patient #1343 . . . Arends, David . . . suffering from—"

"I'm Ireland, David."

"Right, you are. Thanks for clarifying." Grossel blinked, nodded. "Arends is over in the Side Effects Wing. Pathetic case."

"What's he suffering from?"

"Beats me. What was your temperature again?"

"104." Ireland settled back on his plyopillow. "Oughtn't that to be going down by now?"

"Factory Virus 25 is a rough one, so—"

"26."

"Eh?"

"I'm suffering from Factory Virus 26."

Nodding, Dr. Grossel said, "Thanks for reminding me, Arends . . . No, wait, don't correct me. I'll get it. You're Ireland. Same as the country."

"There hasn't been an Ireland since 2017, doctor."

"Oh, so?"

"IRA blew it up, out of spite."

"I never watch the newswall, too depressing." He rose up out of the floating bedside chair. "Now that we know what you're really down with, we can start treating—"

"You mean you've been giving me the wrong medicine up to now?"

"Not wrong, merely inappropriate." He bent, lifted off the top of the plyosheet which covered Ireland's fever-ridden body. "No fur, that's good."

"Fur?" Ireland jabbed back with his elbows and lifted himself into a sitting position on the floating white airbed.

"Nothing to worry about. Get some rest and I'll see you in the morning." Grossel eased toward the door. "If you feel any worse, just buzz that red button on the bed control panel there. A very efficient android nurse will pop in."

"Do you have robots and androids exclusively on the night shifts?"

"No, that isn't our style at NEG." The doctor reached for the handle of the white door. "Each area has at least one human supervisor. Of course, most of our medbots and andies are the very best. Made by Medtex, a most reliable outfit, as you no doubt know."

"Yes, they are." He lowered himself back onto the pillow. "Why did you mention fur?"

"Nothing to worry about." The door handle sensed Dr. Grossel's touch; the door unlocked and whirred open.

By midnight the fires had died away

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outside in Old Boston. The snow was still falling, straight down through the darkness.

Ireland sat on the edge of his bed, waiting for the dizziness to go away. Opening his eyes again, he found the room had stabilized. He lowered himself to the slick floor and walked, slowly, to his wallcubby.

From the green hole he slid his suitcase. It took him almost five full minutes to locate the damned concealed compartment and get it open by pressing his fingertips to the printlock panel.

"Wasn't supposed to be so screwed up by this FV26." His fingers felt stubby and stiff as he fetched out a compact tool kit and a plazpouch containing two of the redesigned 2B Compassion Tubes. "Better settle for repairing just one tonight. Means I'll have to stick here for four more days maybe."

The door was easy to open with the disabler from his kit. It whirred aside to let him out into the softlit night corridor.

The disabler also worked on the first guardbot he encountered. One touch and the big white enameled robot ceased to notice him; didn't ask why he was roaming the halls at midnight in his two-piece sicksuit.

The nearest Mercy android was stationed over in Respiratory Problems, only three corridors away. Even so, it took him a hell of a long time, a good fifteen minutes at least, to get himself there. He felt weary and weak and he had to brace himself against the pale green plaz walls most of the way. Had to stop, too, and catch his breath three or four times.

Ireland was one of the best troubleshooters Medtex had, but the cover illness was hitting him harder than anyone'd anticipated. Didn't matter. He could do the job anyway.

"Hey, fine," he sighed when he shuffled into the final corridor.

Mercy was coming out through swingdoors of the Black Lung Ward, carrying a bloodstained respirator unit. She was exactly five-feet-six, the statistically determined ideal size for this type of nurse, and her freckled face and soft blonde hair were appealingly cute.

She was sobbing softly. "That poor, poor man."

"What's wrong?" Ireland asked.

"Patient 303B," said the android nurse forlornly. "He just . . . passed away."

"You didn't . . .?"

"Didn't what?" She widened her grey-green eyes. "You're not, you know, supposed to be ambulatory at this hour."

"Matter of fact, Mercy, I am." He touched her breast with the disabler. "It's the only time I can work without being noticed."

"Oh . . . Oh my." She stiffened, letting go the respirator. It traced a bloody line down the skirt of her snug two-piece nursesuit. Her arms flapped twice; her eyes did a spin. Her freckles seemed to skitter across her pretty cheeks, but Ireland was fairly certain this was only a side effect of his illness.

According to the floor plans he'd memorized before leaving the central Medtex offices in the Orlando Sector of Sunnyland-2, there was a storeroom midway down the lefthand side of this hallway.

He got the docile Mercy in there. The

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replacing of the potentially defective and dangerous tube was supposed to take, maximum, nine minutes. Tonight putting the first of the four Mercys he had to repair in reliable shape took him nearly a half hour.

When Ireland was back in his cubicle, he was shivering and chill sweat dotted his body. "Take it easy," he advised himself. "You'll fix all of them. Nobody will ever realize."

Part of the city looked to be on fire again. After he blinked his eyes a few times, though, the flames all died and the distant buildings grew whole again.

The plaz flooring was hot and damp. There was a strained, wheezing sound filling the corridor. After listening for a moment, Ireland realized he was hearing his own breathing.

He felt around with his clammy hands, touching the ribbed floor beneath him. "How the hell long have I been sprawled here?"

He'd left his room at midnight again, but tonight he had to travel up to another level of the hospital. Up a series of ramps and catwalks to Death Transition, where the second Mercy android was on duty watching after the dying.

"This makes damn interesting reading, kiddo."

He noticed heavy gumsoled white boots and white trousers. "Who—"

"Let's have us a little talk." A thick hand grabbed him at the armpit, hauled him to his feet.

Ireland saw a thickset woman of about fifty-six go spinning by him. She wore a manstyle two-piece medsuit and she was holding his faxcopy of the list of surviving Mercy androids.

"You really are sick, aren't you?"

"Of course," he muttered, waiting for the dizziness to leave him. "I'm delirious, wandering around in a stupor. You better get me back to—"

"Bullshit. In here now." The hefty nurse yanked him through a pale green door. "Nearcaf or soyjava?"

"Water, plain water'll be . . ." He stumbled, landed in a tin slingchair. He had to clutch at his knees and shut his eyes to keep from toppling out of the chair. "Listen, I'm a sick man, Nurse . . ."

"Nurse Rohmer. Haven't you heard of me, Mr. Ireland? My name's on these papers of yours, along with all sorts of other fascinating data."

He opened his eyes, noticed a glaz of water in his hand. After gulping it down, he said, "You're in charge of all nighttime operations in this sector of NE General."

"Bet your butt I am." Turning her back on him, she punched a button on the soyjava machine beside her desk. "You're from Medtex. They snuck you in here, those chicken bastards, so you can repair the defective Mercy andies you stuck us with."

"I am employed by Medtex, you'll see that on my admission forms," he said, finding it difficult to breathe anywhere near deeply enough. "But I have only a very low-level job. When I developed FV26, the medinsurance agency determined that this was the best—"

"Oh, you've got the disease, all right; I checked your charts on Medico. You know who Medico is, don't you?"

"Medical computer system, designed by Medtex. We've installed them in

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over six hundred hospitals and nursing homes worldwide thus—"

"Medico works pretty good." Nurse Rohmer thrust her wide face close to his. "Mercy, on the other hand, is a real nurfup."

"No, actually it's only a defective 2B Compassion Tube that may be at fault," he explained. "Once that's replaced, I can assure you, there won't be any trouble. Even with the suspect 2B in them, we have no absolute proof that—"

"One of your Mercys killed at least five patients here," the hefty nurse told him. "Lived up to her name by providing a little mercy killing."

"That's impossible. Our figures show only two or, at best, three deaths which might—"

"I'm here, I know."

"Okay, which Mercy is it?"

Nurse Rohmer settled her broad backside onto the edge of her chromed desk. "I think she's no longer with us, the really crazy one."

"You mean the android that was destroyed in that accidental fire?"

Her laugh was a raspy croak. "That wasn't any accident, kiddo, that was Mercy," she told him. "I figure she must've gotten to feeling so sorry for all those poor souls in the Hopeless Wing that she decided to put them all out of their misery at once."

"I can't accept that, no. None of our projections indicate that serious a malfunction."

Nurse Rohmer took a slurping sip of her soyjava. "Then your projections are full of crap," she said. "Okay, now let's talk business."

"You're suggesting a bribe? To keep you quiet?"

"Exactly. I was sure that Medtex, being the sneaky and dishonest rascals they are, would do just exactly what they're doing." She chuckled. "They won't admit they've made a mistake. Instead they send in a jerk like you to mop up on the sly. That's agreeable to me. $200,000."

"What?"

"You pay me $200,000 and I don't mention what I know," she amplified. "See kiddo, nobody else in this dump is on to what's really been going on. I'll give you guys that: this Mercy is clever and she's been able to cover up her little errands of mercy well enough to fool just about everyone. Everyone except me."

"Two hundred thousand is a hell of a lot of money."

"How much do you make a year?"

"Well, $300,000, but my job involves a—"

"How much does a Mercy go for?"

"If you buy in quantity it comes to roughly $200,000 per android."

"What I know is worth the price of one of those freckled bimbos," said the hefty nurse. "I've got Medtex by the short hairs. You get me $200,000 real quick and I'll maintain my discreet silence and help you repair the rest of the andies. A deal?"

Ireland wiped sweat from his face. "Yes, I'll get you the money by sometime tomorrow morning," he promised. "Now, can you help me fix up the second Mercy? I'd still like to do that tonight."

"Wait right here, kiddo," She swung off her desk. "I'll drag her here so you won't even have to get up off your poor fevered keaster."

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* * *

Ireland took his own temperature. "103," he murmured, reading the gauge. "I feel a lot hotter."

Outside a fine snow was flickering across the grey afternoon and black smoke was corkscrewing up out of Old Boston.

"Wouldn't think there was anything out there left to burn."

His cubicle door made an unusual sound, then swished open.

A small man in a three-piece bizsuit came in. He was dark, weathered, and had a quirky smile. "I'm Dagastino."

"Are you the new doctor I requested? See, I don't have much confidence in Dr. Grossel, because I keep getting worse instead of—"

"Grossel's a stimhead." Dagastino seated himself beside Ireland's bed.

"Illicit electronic brain stimulation? If you hospital people know about that, why—"

"I'm not hospital, I'm MSPA," explained the small dark man.

Ireland stared. Massachusetts State Police Agency? "You planning to arrest—"

"Up until recently I figured maybe Grossel was goofy enough to be behind the murders."

After a few seconds Ireland was able to ask, "Murders?"

"Maybe mercy killings," said Dagastino. "You get those in hospitals more than most people realize. You don't look so good, by the way."

"I've got FV26."

"And complications, I'd guess, though I'm no medic," the police detective said. "Since you checked in to NEG and commenced your roaming, Ireland, I've been kicking around a new notion. Could be these five killings weren't the work of a stimhead at all. No, maybe what I want is a robot who—"

"Android," corrected Ireland, automatically. "A mechanical image of a man or woman is called an android."

"You do work for Medtex then?"

"I've never denied that. The thing is, I'm not a top-level employee and—"

"Impressive how thoughtful Medtex is," said the smiling detective. "Send the daughter of the president of the whole damn works up here from Sunnyland-2 just to visit you. That's some fringe benefit."

"Well, Medtex is a very paternalistic operation. Each employee is considered part of—"

"And the redheaded daughter brings fruit baskets to all the working stiffs on the sick list?"

"A good many of them, yes." He glanced over at the fruit basket Berkley had used to smuggle in the cash for Nurse Rohmer. "Miss Medford is quite . . . compassionate."

"Suppose one of these androids of yours wasn't put together quite right?" Dagastino continued to smile. "These Mercy nurses, for instance. All the unusual deaths have occurred since NE General took on the five new ones. If you people learned one or more of them wasn't functioning properly, you'd come out and admit it, wouldn't you?"

"Of course," he said. "You must know what kind of reputation Medtex has in the field. Listen, if you have any evidence indicating anything wrong with—"

"When I have evidence, you'll be

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among the first to hear." He stood. "Anything you can tell me right now?"

Ireland said, "Nope."

The detective paused by the fruit basket, took a pear. "Organic? Very expensive," he said, touching the door. "That's some company you work for."

After the door closed Ireland said, "Damn."

He had to keep moving his head from side to side. "No, don't worry, Berkley, I'm well enough to handle the final one."

"I'm going to come up there again and *get* you." She looked absolutely lovely on the small oval screen of his bedside pixphone. "You're in *awful* condition."

"I've repaired all but one," he said, struggling to keep her image in focus. "There's just the last one over in Post Pysch. I'll do that tonight."

"You're not even in shape to get out of your bed, let alone—"

"I'll do it."

"What's your temp?"

He looked away from the phone. "Around 105."

"That's worse than it's ever been," she said. "I've been talking to Dr. Reisberson who runs the plant infirmary, and he says your fever should've *subsided* two days ago. I'm going to fly up there now and—"

"Tomorrow morning." He faced the girl's image. "I can do this, Berkley. Nurse Rohmer's coming around at midnight to escort me over to Post Psych. There's nothing to worry—"

"*Her*. Why should I have faith in someone who accepts a—"

"First thing tomorrow you can come up and bail me out," he assured her. "If I'm not any better, then Reisberson can look me over. Okay?"

She hesitated. "Very well . . . but tomorrow morning *early*."

"Early." He flicked off the phone and her image died.

Midnight and no Nurse Rohmer.

Ten minutes more. She still didn't appear.

There were new fires all across the old town tonight. Buildings were burning away, toppling. You could even hear the trapped people screaming.

"No, that's wrong." Ireland concentrated, easing out of bed. "You can't really hear any screams inside the dome."

He fell, got up.

"I am worse. They aren't helping me here, not at all."

Didn't matter. Important thing was to get over to Post Psych. Fix the final Mercy.

"I can . . ." He moved toward the door. "I can call Berkley tonight . . . soon as I finish."

She could come up for him tonight, in a few hours. Dr. Grossel was obviously incompetent, but once back in Sunnyland-2 . . .

"How'd I get out here?"

He found he was in a pale yellow corridor.

"That's okay. I'm closer than I thought."

The whole job could be done without the help of Nurse Rohmer.

Something down at the corridor end, somebody sprawled on the pale yellow flooring near the down ramp exit point.

Ireland, keeping his hands pressed to

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the slick plaz wall, worked his way toward the fallen figure.

". . . got it all worked out," said Dagastino when he saw Ireland standing over him.

"*What happened? Did you fall from* one of the catwalks?"

"No, it was her. She pushed me. To make it look like an accident." There was blood easing from his nostrils and out the side of his mouth. "I'm not going to . . . you can do something . . . listen, quick, before she gets back."

"Who? Mercy?"

"But not the one you think," said the dying detective. "The one we want . . . I just put it together tonight . . . it's the fifth Mercy."

He lowered himself to his knees beside Dagastino. "No, she was destroyed in the fire."

"That was faked . . . she's smarter than you bastards realize . . . she realized somebody might get on to her, so she faked . . . to keep doing her work . . ."

"I don't understand."

"She made it look like an android had been done in by the fire . . . then she took over a new ID."

"An android can't do that. It violates the basic laws of robotics."

"Even so, she did it . . . tonight I *found . . . found out what had happened* to the real Nurse Rohmer . . ."

Ireland wiped at his perspiring face. "That's impossible. Mercy's a slim young woman. How could she disguise herself as a husky middle-aged nurse?"

"Not that tough . . . if you're smart . . ."

"It's too farfetched. You're trying to tell me one of our androids can do things that no . . . Dagastino?"

The detective was dead.

Ireland knelt, watching the dead man, for several minutes. Then, with difficulty, he got himself upright again. "That's goofy, the whole notion is."

A door whirred open midway up the corridor. Nurse Rohmer stepped out, fastening up the tunic on a fresh medsuit. "You're looking really bad, you poor boy. I'm starting to think you won't ever pull through," she said as she strode toward him. "We're going to have to see what we can do for you." ■

● The world will end neither with a bang nor a whimper, but with the strident cries of little men devoted to cost-benefit ratios. If cost-benefit ratios had governed our history, Socrates would have become a baby-sitter, Newton an apple polisher, Galileo and Giordano Bruno court jesters, Columbus would have taken out a gondola concession in Venice, Thomas Jefferson would have become a tax collector, John Milton would have written limericks and Albert Einstein would have changed his name and stayed in Germany. —Norman Cousins

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Jay Kay Klein's

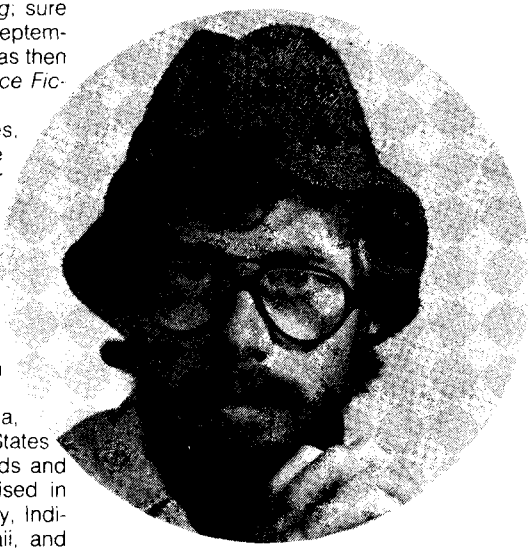
BIOLOG

An avid science fiction fan, and a convention chairman as well, Steven Charles Gould was inspired to write his first story after seeing Harlan Ellison in action at a writer's workshop during a convention. This was promptly rejected. Five years later he wrote another story during another convention workshop. Theodore Sturgeon liked it and suggested it be submitted to *Analog*; sure enough, it was published in the September 1980 issue. A second story was then bought by *Isaac Asimov's Science Fiction Magazine*.

Now, short stories, novelettes, and a novel are in progress. The acquisition of a word processor has proved helpful in this literary outpouring. Meanwhile, a full-time job expediting the manufacture of oil tool prototypes currently pays for day-to-day expenses. In this, Steve combines the talents of an engineer, a purchasing agent, and a production scheduler.

He was born at Ft. Huachuca, Arizona, the site of the United States Army Electronics Proving Grounds and Intelligence School. He was raised in Arizona, Taiwan, Texas, Germany, Indiana, Thailand, Oklahoma, Hawaii, and Kentucky. During five years off and on at Texas A&M, he switched from mechanical engineering to philosophy, with a minor in computer science.

Steve may have a quick mind, but as one of science fiction's newest and youngest writers he still retains the nimbleness of youth and combines this with a tumbler's disposition. His interests include scuba diving, shotokan karate, survival techniques, sailing, spelunking, and skiing. He is reputed to climb walls, swing from beams, and especially to perform forward rolls over seated citizenry during informal moments. Since he has curly red hair and cadmium-red freckles on a rosy complexion, Steven is hardly inconspicuous at any gathering. It should be noted, too, that he is the possessor of an irrepressible sense of humor. ■



Steven Gould

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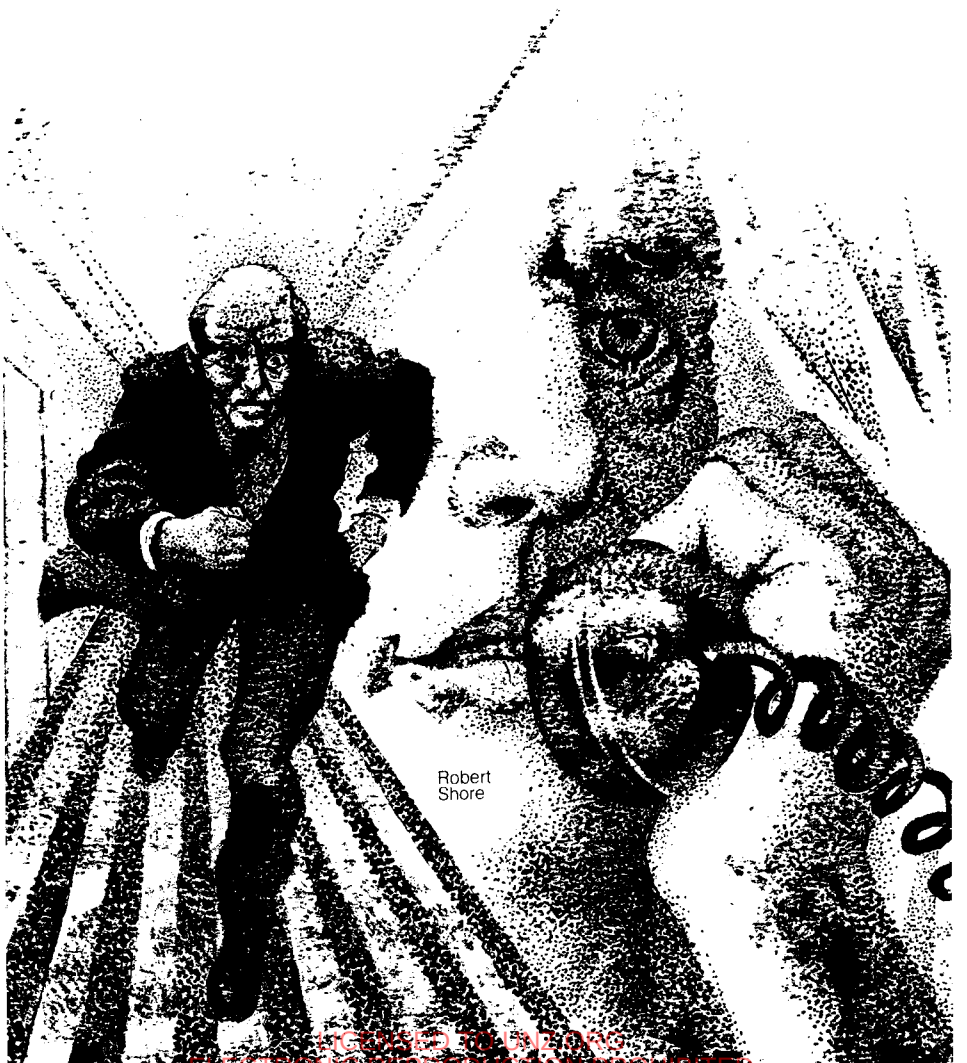
Steven Gould

GIFT OF FIRE



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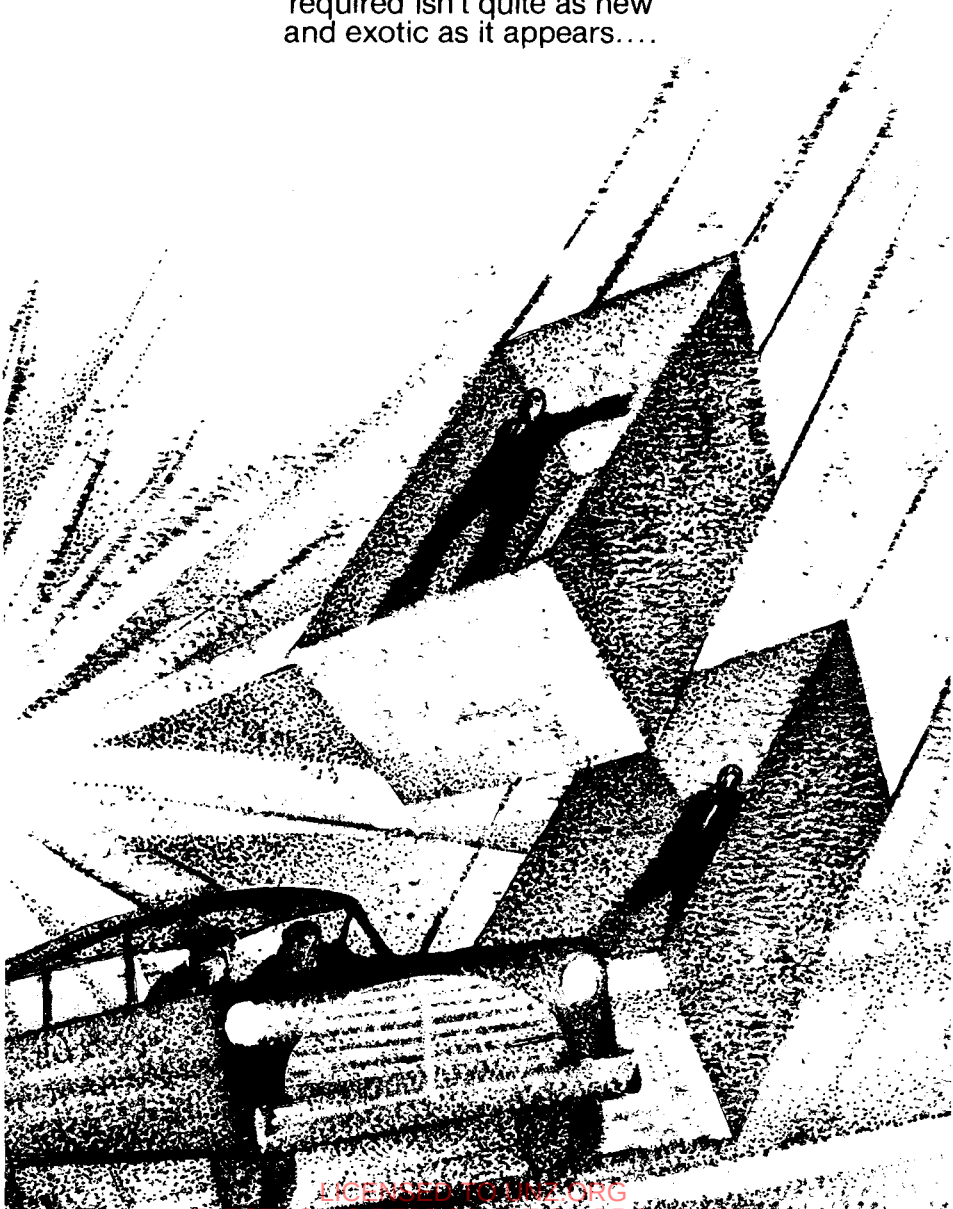
New technologies open up
new possibilities,
including new forms of nastiness.
But sometimes the technology
required isn't quite as new
and exotic as it appears....



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Down at the office, right below the digital clock that gives the wrong time in twenty-four different time zones, is a sign which says, "You know it's going to be a bad day when . . ." There follows a whole host of unlikely but witty catastrophes. I'll never forget the first one: "You know it's going to be a bad day when you wake up face down on the pavement."

They're right.

The pavement is gritty. Bits of sand grind into your face. That's the first thing that penetrated the dark, fuzzy curtain.

The pavement is cold. In summer the early morning sidewalk is pleasantly cool (bare children's feet slapping the concrete—watch the crack, your mother's back), but in late October, it numbs the cheek and congeals the saliva and blood puddled by my mouth.

I retreated for a time back into the dark. Further inventory was postponed.

Some of the dark, fuzzy curtain faded and I regained an extremely detached interest in the state of things. Taking stock: grit—check. Cold—check. Siren—check.

Siren?

Introduction of auditory phenomena. There were muffled crowd noises and shuffling feet. Then the voice of authority telling them to get back, get back. Hadn't they ever seen a stiff before? The siren grew louder along with shouts of let them through, let them through. The patter of trotting feet preceded the gasping of the ambulance attendant. There was a crunch as a case was set by my head and a muttered, "Jesus, what a mess." Then two very warm fingers pressed against the old scar tissue on the right side of my throat.

"Cold as stone and no pulse." The voice was young and confident. It flickered through my brain that the last time I'd been that sure of anything was when my mother rocked me in my cradle.

In the back of my mind a clinical voice started lecturing. Cold? Of course it's cold, stupid. The windchill factor is six degrees centigrade. Exposed flesh can take only so much before the capillaries squeeze off and save the heat for the body core. Pulse? Ever since a chunk of shrapnel passed through that portion of my neck in Belfast, the pulse has been hard to find there. If the bomb hadn't gone off in the waiting room at St. Mary's right next to the emergency room I wouldn't have a pulse at all. As it is, the blood flowing down that side of my neck does so through a Dacron polyester tube beneath six millimeters of scar tissue. How many people have you killed by checking the pulse at only one point?

This is what went on in the back of my head, but from there to my lips seemed leagues. Instead, I continued inventory.

Hands? Oh, yes, bunched into my stomach where the pain was. Legs? But of course, askew in a truly uncomfortable position. I must have been unconscious when I landed. My knee throbbed lightly. Discount.

Awareness was seeping in with the unpleasant inevitability of rising water. My left eye could see the white shoes of the ambulance attendant walking over to a shining pair of black shoes.

"Shall we take it in?" How very personal: 'it'.

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"No, we have to get pictures. Just throw a blanket over him and wait for the lieutenant."

I gave the matter some thought. If I stayed where I was I'd get a nice warm blanket. This led to the thought of waiting until they unveiled my corpse for the lieutenant and saying, "Boo." Unfortunately, this thought so amused me that I started laughing weakly and spoiled my chance.

"My God, I thought you said he was dead!"

I rolled over in time to see the ambulance attendant turn white as his shoes. Still clutching my side, I sat up and looked at the blood soaking my coat. Just before I passed out again, I said, "Does this mean I don't get a blanket?"

The worst possible feeling I know (and I've run the spectrum, from a broken heart to physical interrogation) is waking up in intensive care. The experience is not unlike an intensely real nightmare, for you're still groggy from the sedation, but instead of keeping you comfortably unaware, the effects just make you more disoriented. They've got a respirator down your throat (you can't lick your lips), there's a catheter up the other end (and that's a pain of extreme magnitude, not to mention indignity), and there's at least one tube in your arm. Your lips are cracked despite the Vaseline they apply and the corners of your eyes are grainy. Compounding all this, they have tied you down so you don't disturb the tubes in your 'sleep'.

Six times I've fought my way out of the darkness only to find this nightmare. Six times. . . .

The nurse sitting before me looked up from her magazine and saw my eyes open. Much as it cost me, I winked and smiled as well as one can around that damn tube. She smiled back and stepped to an intercom by the battery of monitors that had squiggly little lines going up and down to the beat of my heart, the rise of my chest.

"Dr. Galt. The patient in three is conscious."

"I'll be right there."

She came over to my side and said, "Don't try to talk. You're going to be just fine."

Dr. Galt showed up thirty seconds later and spent his first minutes taking my pulse and shining a penlight in my eyes. Then he straightened up and said, "Just nod or shake your head to answer. Do you know who you are?"

Nod.

"Do you know what happened to you?"

Nod.

"I bet you'd like this respirator taken out of your throat."

I nodded my head.

They took loose the straps from behind my head and slid the tube out. As usual, collected saliva dripped down my chin and onto my chest. The nurse deftly sponged it up. No dignity.

I worked my mouth experimentally. The jaws hurt after being held open for so long and the throat wasn't used to swallowing. I cleared my throat a few times and asked for a drink of water. While the nurse poured I asked, "Is there a prognosis, Doctor?"

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I was careful to speak from the diaphragm, coming across clear and hearty.

He looked surprised.

"You sound good. How do you feel?"

"Like the watch in a Timex commercial." I grinned to show I felt great, because if there's one thing hospital staff hate, it's a grumpy patient. The first thing you know they stuff that damn tube back down your throat and they'll never take the catheter out.

"You have so many surgical scars I almost put a zipper in to save time in the future."

Chuckle for the nice doctor. Later you can break his neck. "What else did you find besides old scars?"

"A thirty-eight slug lodged neatly between your right floating ribs. The entrance wound was on the right side of your stomach. The bullet traveled through fat and muscle to get there. No organ damage. I put three stitches in your upper lip where you busted it against the ground and there's a swelling behind your left ear, but the x-rays didn't show anything but that cute plate over your right ear."

He sighed. "If you don't get any worse in the next twelve hours, we'll move you into a regular room."

Impala is a Zulu name for a large brownish antelope with lyrate horns. It can accelerate from a standstill to sixty kilometers per hour in about five seconds.

The Chevy Impala is a General Motors name for a large steel automobile with an electric horn. It also can accelerate from a standstill to sixty kilometers per hour in five seconds.

It is generally acknowledged that the Chevy Impala is more dangerous than the African impala.

"Well, who was it?"

Carson was a rugged blend of determination and pessimism. He was the only man I knew in the D.A.'s office who honestly gave his all to secure the conviction of those he thought guilty. Yet he did so knowing that over sixty percent of the time the foibles of judges, clerks, and the law in general would defeat him. Unlike his colleagues, though, he was deterred from his struggle by this knowledge about as effectively as a toothpick deters a charging rhino.

I answered. "I think it was Tapager's men, Thorton and Roth. They were driving a seventy-seven Chevy Impala, Colorado license plate SCG-453. You might as well check it, but I'm sure it was stolen. I can't even prove it was those two, but I have no practical doubts." I pushed the button that raised the back of the hospital bed. It brought me eye to eye with him.

"Where did it happen?"

"The alley past Fifth Street, between Smith and Jester. The bloody walls were just as wide as the car. They were going to run me down."

"*How'd you avoid it?*" He was just as methodical in court.

"You wouldn't believe me."

"You might be surprised. In the last year there have been twelve attempts to kill you—yes, I know about the poison. The lab sent me a copy of the report. You've been bombed out of two apartments and been shot at several times. This doesn't count the number of times

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you've probably been attacked and haven't told us about ''

''All right. I jumped over the car.''

''I don't believe it.''

I smiled. ''Suit yourself. Just remember that a car going sixty kph passes over the space you stand on in less than a tenth of a second. I can clear five feet for that long—just don't jump too early . . . or too late.'' I shrugged. ''They slammed on the brakes and tried to back over me but they jammed the car crossways. I was almost to the street when they started shooting. When I jumped for cover by the wall, I knocked my head against a pipe. It knocked me out. I must have fallen back towards them to catch the bullet in the stomach.''

Carson consulted a sheet of paper. ''That's when people started looking out windows, according to the police report. The two men in the car gunned it down the other end of the alley and disappeared. You were right about the car—it was stolen Saturday and they found it abandoned two hours after you were shot.''

''It tells us something.''

''What's that?'' Carson asked.

''We're getting close.''

''Wonderful. Any closer and we'll have one corpse and no case at all.'' He folded his hands across his lap, fingers intertwined. ''Do they know you work for us?''

''Not unless you've blown my cover by walking in here. What's the idea? I sold the police a fairy tale about muggers.'' I let annoyance flicker across my face and color my voice.

''Relax. I came up the service elevator and there's nobody in the hall. I wasn't seen.'' He sighed. ''It doesn't look as if it matters now, anyway. You're about as useful to us in the hospital as a case of hepatitis.''

''Oh ye of little faith. I'll be on the street in two days.''

''The doctor said a week when I talked to him on the phone.''

''And maybe you think he can keep me here? Silly person. I'll be out before you can say septicemia.''

''That's what I'm afraid of.''

Carson came back ten hours later with a thin brown folder in his hands and a vacant, haunted look on his face. He dropped it on my lap—the folder, not the look.

It began, the file said, as a family reunion much earlier that same day, just an hour after Carson had finished talking to me. The information in the folder was sketchy, though graphic, and my imagination readily filled in details.

M.R. Tapager's clan had gathered in the penthouse dining room to reaffirm family ties and celebrate Tapager's sixty-first birthday. Attending were two sons and respective daughters-in-law, one daughter—unmarried, and seven grandchildren—well scrubbed, well dressed, well behaved. Tapager's wife, Doris, brought in the cake, a magical creation of icing and candlelight. Tapager sat back and soaked it all in, smiling hugely.

''Make a wish! Make a wish!''

Tapager gathered in an enormous lungful of air and exhausted it violently through pursed lips. The candles struggled valiantly, but, in the end, they succumbed to the typhoon.

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The clan applauded and Tapager began to cut the cake.

"I'm sorry, sir, but there's a phone call." Unnoticed, Roth had entered the room and quietly moved to Tapager's side. "They refuse to give their name, but they say it's critical."

Annoyance battled briefly with Tapager's buoyant mood and lost. He smiled at his family. "Back in a moment, everyone." He stood and preceded Roth out through the oaken door and down the hall to the phone. Roth carefully shut the doors before following.

"Hello, Michael Tapager here."

A voice out of the past spoke—a dead voice. "You took them all from me, Michael. Sarah, Bobby, Tommy, Merissa . . . you took them from me! Well, I'm doing the taking now. Happy birthday!"

There was an abrupt click as the impossible voice hung up. Tapager dropped the receiver and was pounding down the hall before it bounced. A startled Roth followed. Halfway down the hall the ceiling began showering them with foam as something triggered the automatic firefighting system. Tapager lowered his head and charged on.

He hesitated a moment before the door, listening to an unearthly crackling, roaring noise. He grabbed the handle and screamed as the metal burned into his hand—he could see the blackening of the doors' edges now and noticed the smoke that poured around them. With his good hand he snatched a standing lamp from the corner and used its base to hook the door handle. The door opened. Tapager dropped the lamp and fell back against the opposite wall and covered his eyes from the searing blast of heat.

The living room literally blazed, white-hot. A roaring filled the hall, highlighted by the screeching of tortured metal. It was impossible to see into the room; the heat and light defeated any attempt. Nevertheless, Tapager had started to throw himself into the room when Roth grabbed his arm and whirled, throwing him six meters down the hall. Tapager fell to the ground and slid, unconscious, into piles of foam.

His employer safe, Roth looked into the dining room. A gust of super-heated air brushed across his face, raising blisters instantly. He drew a deep breath for a scream of agony, but it never came. The incredibly hot gas entered his lungs and he collapsed, quite dead.

Tapager was the only survivor.

My eyes were still wide open in disbelief, shock, horror, when Carson dropped a second file on the hospital bed beside me. I just stared at it dumbly.

He told me, "This is the case as of two hours ago. They're still holding Tapager under sedation upstairs so we didn't get anything out of him. We have the phone call verbatim because of the bug you put on the line last week. We released it to Homicide."

I came back slowly. My hands curled around the folder's edge and gingerly picked it up. "Did they ask any questions?"

"Plenty. Now that they know we were investigating, they want all our evidence, anything that might give them a lead."

"Gonna give it to them?"

He frowned. "I don't think we have

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much choice. Not only does it open up a whole new class of suspects that they don't know about, it gives them more motives. They didn't even suspect Tapager of organized crime activities."

"Ha. Over two percent of the force is on his payroll. Some of them *know*. What about our investigation? And what about the press?"

"Frozen. The media are out in the cold. Chief Federman even let a line slip about 'faulty electrical contracting under consideration.'" His shoulders lifted, squared themselves. "I want you on this thing. So does Bawcomb." Bawcomb was the District Attorney, our respective boss. "If it ties in, fine, but we want to clear this before we take Tapager to court. We want it clear whether he brought this on himself or didn't before we put him in front of a jury. Any sympathy for his family's death could affect the verdict."

I shrugged. "It still doesn't seem right to attack a man when he's down. And you can't get further down than he must be." I opened the file. "What sort of incendiary was it?"

His eyes widened. "Didn't I tell you? It wasn't a bomb at all. So far they can't find *any* traces of a chemical cause. In fact, the latest thing they were considering was a laser."

Silver is the key. Pure, it melts at 961.93 degrees Celsius. As sterling —seven and a half percent copper by weight—it melts at a higher temperature, approximately one thousand degrees Cee. Above two hundred degrees, a thin film of silver oxide forms. Above 2,210 degrees centigrade, it boils.

On the outer edges of the penthouse dining room, silverware was found with a thin coat of oxide. Where the two ends of the table used to be, silver was puddled on the floor. And, at the center of the room, a solidified puddle of silver, tentatively identified as a soup tureen, was honeycombed with bubbles, trapped as the silver cooled.

At some point between the bubbling and the merely molten silver, glassware had melted—a process requiring 1,425 to 1,600 degrees, depending on the composition of the glass. Most other areas in the room it had merely cracked and blackened.

The bodies, as one of the fire inspectors commented, were not unlike those recovered from blast-furnace accidents. Identification was complicated—fillings had flowed, bones had crumbled, personal jewelry was fused.

A shower of glass had littered the patio, leading inspectors to say that the windows had exploded outward—either from an explosion of some kind or expanding air. The redwood patio deck outside the windows was charred back further from the dining room than the fire alone would warrant.

And then there were the shadows. Where a stainless steel serving cart stood before the fireplace, a shadow had been cast. A fuzzy outline of the cart was etched into the fire brick. More accurately, the area shadowed was not etched. It stood raised, relatively intact—merely blackened by smoke. The area outside the shadow was pitted and cracked.

Once, I had held an oxy-acetylene torch to a sidewalk and watched the concrete pop, little chunks of surface flaking away in the heat. The etched fire

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brick was similar, as if the cart had been placed against the wall and a large torch washed across it. *But,* the cart was a meter from the wall when it cast its shadow—cast by something from the north. A something that had burst upon the diners through the windows and fried them where they sat, heating the air around them so rapidly that the windows blew outwards to allow the expanding gases to escape.

I dropped the report on the bed and rubbed my hands across my eyes. With a slightly shaking hand I poured myself some water from the bedside carafe and sipped. I made myself take several deep breaths with closed eyes before I picked up the report again.

The cart had been moved by the firemen in the initial firefighting operation and was finally relocated with some degree of accuracy by locating the residue from its rubber wheels caked on the concrete of the floor. By lining up the cart and its shadow, a rough direction was obtained of the source of radiation. The fuzziness of the shadow made precise direction impossible to obtain, but the essential direction was north-northeast, right at the MacDonald Tower, the largest and newest skyscraper in the city.

Carson picked me up at one in the morning, skulking along the bushes near the service entrance. I climbed in and leaned back with a sigh. He drove on.

"You don't look so good. Are you sure you want to do this?"

"So I'm dedicated. Leave off, I'm just tired. I had to wait for the night nurse to do her number before I left. They'll close my record with left A.M.A. and Dr. Galt will send us a nasty note."

"A.M.A.?"

"Against Medical Advice."

"Why didn't you just leave? If any doctor wants to keep his license to practice, he's got to let you leave if you want to—even if you're bleeding to death."

"Yeah, but he's not going to let you go without an argument, and I'm just not up to a knockdown, drag-out fight."

He was quiet for a moment, concentrating on the access ramp to the expressway. I was glad. The stitches in my side were killing me. I stirred. "What have they found at the MacDonald Tower?"

"So far, nothing. They've gone through every office suite in the building looking for any signs of heavy equipment recently moved or set up. I wonder at the sense of it. It was over sixteen hours after the fire that they started to suspect a laser. That's more than enough time to cover up the traces."

"Hmmmm. I made a few phone calls today to old contacts around the country and I've come up with a few suggestions. They may have been already covered, but it can't hurt to make them."

"Okay. What are they?"

"First, check the power company. Get the demand meter reading for the building and see if there's been a surge at the corresponding moment. Second, if I recall, the MacDonald Tower was additionally funded by the Department of Energy as a test bed for large-building energy conservation measures. It has several composite flywheels in the basement that store energy for peak load use. If there's no peak recorded by the power

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company, it doesn't mean that there wasn't a laser fired. Check whatever recording equipment the building itself has. They probably have extensive instrumentation. Third, there had to be extensive rewiring to the site of the laser. Normal building lines wouldn't handle it. Even if they've ripped it out, traces would be hard to completely obliterate. Look for them. Last, look for signs that someone rigged an exhaust for high-temperature gases—some sort of temporary ducting."

"Why?"

"One of the ways military lasers are obtaining power is to fire rocket engines through an MHD generator."

He took the Dees Street exit ramp. "What the hell is MHD?"

"That's what I said. It stands for magnetohydrodynamics. Trust me, it's genuine. Not only would this keep the current from showing on the power company's demand meter, but it would let them avoid rewiring as well."

"They checked the demand meter already, and they can't find any surge. This is normal since the building is largely deserted on Sunday. However, they haven't, to my knowledge, checked the other things you've mentioned. I'll pass them on."

I rubbed my hand absently along where the dressing made a bulge under my shirt. "Something else. If there's any air pollution monitoring equipment in the area, check Sunday's record. If someone's been firing rocket engines, the parts per million count should have jumped a bit."

He pulled the car up in front of my apartment building. "Where will you start?" he asked.

I got out of the car and searched in my pockets for the key. "While the police concentrate on how, I'm going to look for *why*."

After ten hours' sleep in my own bed I felt much better. I went out. The tramway took me across town to the shadow of the Tapager building. From the sidewalk, the burnt area on the side of the penthouse wasn't visible. I shrugged and moved down the block to Gable's Club and Restaurant. I went in.

Roscoe, the manager, saw me immediately, I knew, for he got a sick look on his face and made for the back office. I went to the bar and ordered a margarita. When it was ready, I took it to a table in the corner with a clear view of the front door and Roscoe's office.

Ten minutes later Thorton came in the front with one of the Tapager lower-echelon heavies. The sidekick carried a small canvas bag in his left hand. They came straight to my table.

"I suppose you're both wondering why I've called you here," I said.

Thorton almost snarled at me. But then, if my partner and my boss's family had just been cremated, I might feel testy, too. Both of them drew chairs and sat. Thorton leaned forward and let me see his biceps bulge under the permanent-press shirt. Then, in an even, cultured tone, he said, "Humor is a much misunderstood art. This is because any moron who's read the joke section in Playboy feels obligated to practice without a shred of talent. Wouldn't you say so, Ike?"

The other one played with something under the table. "Undoubtedly. Even basic tenets of humor like the pratfall

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get slaughtered today. Comedians today slip on a banana peel and get ovations. No class."

Thorton, who had yet to smile, considered his nails now. "No, a simple fall isn't very funny. Something that would really break me up, though, is if you put a bullet in this gentleman's stomach with that silenced pistol in your hand. Wouldn't that strike you as funny, Ike?"

"Hilarious."

They both did something with their lips. If they were smiles, they weren't nice ones.

I sighed and continued scraping the salt from the rim of my glass and dropping it into the drink.

"I don't see why every hood in the southwest has to talk tough. The hoods in the north gave that up long ago. Something about maturity, I suppose."

Thorton leaned back. "A bullet travels a darn sight faster than a car. Think you can jump over it?"

"I don't have to. Who killed Tapager's family?"

"Why do you care?" My cool was getting to him. "Who you with? The press? Or the police?"

"So sad. You still don't see it, do you?" I smiled and shook my head sorrowfully. "Who burnt the penthouse?"

"For all I know, you did." He became more abrupt. "Who are you?"

"The wave of the future, Thorton. And you don't got no surfboard. Think Tapager's organization is going to survive this? He's old-fashioned—a real godfather. Did you think you were going to step in?"

Ike became agitated. "This is no good, Joe. Let's do it and get out of here. Roscoe can take him in the back, like he does with all the morning drunks."

"No, wait," he said to Ike. To me he asked, "You from Dallas, maybe?"

"I thought you had some promise, Thorton, but you're still thinking regional. We're international these days. Provincials like you might not fit in."

Ike tensed. "Enough of this crap! I'm doing it!"

I'd been watching his arm circumspectly ever since he'd sat. My foot smashed his wrist into the table top with enough force to make the table jump. He made a strangled noise and something metallic clattered to the floor. I threw the remains of my margarita in his eyes. He put his good hand to his face and screamed.

"If the lime juice don't get 'em, the salt will," I said. "Get him to the restroom and let him rinse his eyes. Then, if you've a mind, come back and talk."

Thorton stared at me for a moment, then slowly nodded and helped Ike up. He started to bend down and retrieve something under the table, but I said, "Uh, uh," and shook my head. He shrugged and walked Ike back to the john.

When they'd both vanished, I picked up the gun. It was a thirty-eight with a steel-wool packed silencer. I cradled it in my lap and ordered another drink.

Thorton came back alone. He sat down and stared at me.

"You sure talk a good story, but I don't think you really know anything."

I held up my left hand and extended three fingers.

"I will name three people, three addresses, and three activities: Bill Page,

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John Roarke, and Sven Knudson—345 Antoine, 20011 Perosa, and 4500 Wayside—large-scale distribution of methamphetamines, control of illegal gambling, and the collection of incriminating evidence for the blackmailing of public officials."

He turned pale under his tan. "Sheeit. Well, I know you're not a cop. If what you just said was in their hands, we'd know."

"Small talk. Who hit the Tapager penthouse?"

"Why?"

I put a very frosty look on my face. "One call, Thorton. That's all it would take. The whole organization down the drain."

"So? I'm still not saying anything without knowing why."

I sighed. "Okay. I'm coming across a little hard. Your buddy scared me and I'm a little tense." I sipped my new drink.

"When, not if, we move into this area, we'll want to know everything about the territory. Well, I know most of that. But I don't know who hit Tapager and I want to know if it was business or personal. Whoever did it hits very hard and, if it's a rival group we don't know about, we'll need to take steps to negotiate or neutralize them. Who did it?"

Thorton seemed to think it over. "All right, I'll buy that. Now what's it worth to you?"

I growled and lifted the barrel of the pistol over the edge of the table.

"Okay, okay. It was Bishop—Thomas Bishop, the boss's old partner. But you can't touch him—he's dead." Thorton laughed. "In fact, he's been dead ten years!"

Carson had to be fetched from the men's room. When I call, though, there's never any question of "would you like to leave a message?" They get him, right then.

"The name is Thomas Bishop. He was supposed to have died ten years ago along with his family. Sound familiar? He was Tapager's full partner."

Carson asked, "Why did they think he died?"

"Oddly enough, there was a fire. An adult male skeleton was identified as Bishop because it was found in the burnt wreckage of the Bishop residence along with the bodies of the wife and kids. The kids all had recent dental records so there's no doubt of the I.D. After all, Bishop didn't show up to say he wasn't dead."

"So, Tapager did it, eh?"

"Looks like it. Only Bishop wasn't home. I don't have the faintest idea who the other man was, but if you hit the missing person reports of the time, you might find out."

"We'll check the names of the family against the names on the phone tape." He paused. "But why take so long to get back?"

"I don't know, but I remember hearing that a really good piece of vengeance should take years."

"Well, if it's Bishop, he's built himself a masterpiece."

In the late afternoon there was a knock on the door. I lifted a little panel to the right of the door and put my eye to the little fiber optics viewer the land-

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lord knew nothing about. I've been leery of regular peepholes ever since a time in Boston when a bullet came tearing through the wood and into my head—the part that's stainless steel now.

It was Carson. I let him in.

"The third man from the right is Bishop," he told me.

I took the photograph from him and inspected it with a large hand glass. "What was the occasion?"

"Board meeting of Culver Aerospace. Bishop was chairman of the board, not to mention their best engineer. Tapager is also there, behind Bishop. He was right behind Bishop in other ways, too. As majority shareholder, he was responsible for Bishop being chairman."

"What happened to Culver Aerospace? I don't remember it as a Tapager holding."

"It was bought seven years ago by a small cartel of investors. They changed the name to Daedelus Enterprises and went into the solar energy equipment business. They're into everything from windmill generators to passive solar architecture. In fact, they're the chief design consultants for the MacDonald Tower."

I looked up. "You don't say? Do you smell something like catfish in the sun?"

"Don't know. Anyway, that brings us to this." He pulled a video cassette from his briefcase and handed it to me.

"What is it?"

"It's the videotape record of part of the MacDonald Tower search. There are over one hundred and eighty office suites that overlook the Tapager Building. They didn't film every one."

I took it over to my videotape recorder and turned it and my TV on.

"I borrowed it from the department and made a copy. Likewise for the photograph, so you can keep both here." He punched the rewind button on the VTR. After a minute, he hit play.

The screen lit up with a cardboard sign hurriedly lettered:

MACDONALD TOWER SEARCH
TAPAGER FAMILY SLAYING
REF. CASE #2349-A

I backed up and sat on the couch. What followed was a jerky tableau of office suites, hallways, utility rooms and stairwells, all scanned quickly but thoroughly. I got up and grabbed the remote control. "What about the Pollution Index for Sunday?"

"It was particularly low. There were no unexplained peaks. The same is true for the building energy monitor. There were no large peaks on Sunday."

I stopped the VTR and played back a section at a slower rate. "What direction was the wind? Could it be that the rocket exhaust was blown away from the monitoring equipment?"

"I don't know. I'll suggest it," Carson said.

"Any sign of ducting?"

"None that the police found. I thought you might spot something out of the ordinary, though." He rummaged in my refrigerator and found two bottles of Heineken Dark.

"By the way, how did the police justify the search if they aren't letting out the news?"

"Bomb scare. Anonymous phone call." Carson brought one of the beers

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over to me. "The force is treating this really screwy. Half the time they resist the notion of a laser and the other half they bring up the most outlandish ideas. Chief Federman has fired off an inquiry to Project Sipapu at White Sands asking for info on lasers and charged particle beams. There's a lieutenant in Homicide who's sure a pyrokinetic is responsible and the people at the crime lab are convinced the laser was fired from an aircraft in the same line as the Tower."

"Could be. Has anyone checked the airport's flight records? That's the direction of their holding pattern. They would know if anyone was in the right place at the right time. But, you might as well check with NORAD while you're at it. A satellite, with the right orbit, is just as likely as an aircraft." I thought about what I'd just said. "Nah, skip that. To fire at that angle, a laser from orbit would have to punch through an enormous amount of atmosphere."

"No, I like it. That way Bishop could have vanished into orbit, right?"

"Save those ideas for after you drink the beer. I'll forgive them then." I jerked my way through the tape, mind deliberately blank, hoping something unusual would click and put the whole thing in my lap.

"Oh, by the way . . ."

Carson looked up. "What?"

"Tapager's people think I'm organized crime. I gave them that impression to get Bishop's name out of them." Carson started to say something, but I cut him off. "I couldn't just walk up and ask. I'm telling you so you'll take more care not to violate the integrity of my cover. Okay?"

Carson stared at me for a moment, seeming to brood. "I gave up trying to nursemaid you months ago. I just have to make the token noise now and then so that when they pull you out of the park lake I won't feel guilty." He raised his beer. "Here's to survival."

"*Salud.*"

I went back to the tape. A cop was silhouetted against a wall of glass in one of the hallways of the building. He was trying to open one of the panes of glass that made up the wall. After fiddling with the bulky hinge-latching mechanism for a few moments he got it open. The cameraman moved forward and shifted the focus until I found myself looking across the kilometer and a half to the burnt-out ruin of the Tapager penthouse.

I sighed, leaned back, and sipped my beer. "Oh, Prometheus, you've really done it now."

Dressed as became my station (deliberately dirty jeans and a turtleneck under a shirt), I left my place at midnight. I'd been over the search tape three times with no results and I'd no new ideas at all. I put one tennis shoe in front of the other and let my subconscious steer.

Despite the afternoon's heat, the night was cool, fifteen degrees centigrade. Day/night temperature extremes were not unusual in a dry climate like ours. The wind pushed half-heartedly around building corners and stirred the hair on my forehead. Very few people drove by and even fewer walked the streets. Those that did gave me a wide berth. I hardly noticed.

After a kilometer my wandering thoughts were called home by a pain in

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my side. I looked around and found myself standing before a playground at one of the many small parks spread across the city like measles. Even muggers and pushers need their tailored environments, I guess.

Now where did *that* black thought come from?

I walked into the park and sat down on a bench to give the stitches a rest.

Did they feel anything when they died? I tried to imagine what it must have been like to go from air-conditioned comfort to inferno in less than two seconds. The visions that I conjured up chilled me to the bone. I shivered. The ghosts seemed to be just out of sight in the dark, screaming.

Pain or no pain, I stood up and walked away from those dark thoughts. I retraced my steps to my apartment building and stood for a moment, regarding the night.

Somewhere a phone was ringing. Halfway up the stairs I realized that it was mine so I hurried, bringing stabs of protest from my side. I fumbled with the keys and grabbed the extension in the kitchen.

"Hello?"

"Larry? Robert Bawcomb here. I hope I didn't get you out of the shower or something."

"No. Just out walking. Puzzling things through."

There was a pause. Then, "Do you remember where we last had dinner together?"

Understanding dawned. "Yes sir. I take it you don't want me to tell you where that was?"

"Correct. Can you be there tomorrow at ten in the morning?"

"Yes. No questions, right?"

"Right. Someone will meet you."

Silverstone Bluff is a rocky hill that would be called a mountain anywhere east of the Rockies. It is north of the city, just a hop, skip, and a stumble from Interstate Ten. At the base of its west face, I met Bawcomb and Carson.

They both had climbing gear with them. Good cover for a pair of rock climbers on a Saturday. We'd all three done this face the month before. Supper had been hash over a campfire.

"Morning, Larry."

"This is very dramatic, Bob," I said, shaking hands.

"You ain't heard nothing, yet." Bob Bawcomb, district attorney, was a gray-haired giant in disgustingly good shape. His normally cheerful grin was diminished.

"Well?"

Carson and Bawcomb exchanged glances.

"The case is closed. The cause of the fire was spontaneous combustion and all files pertaining to the case have been confiscated."

"By whom?"

"A little man from the National Security Service. He showed up last night with the regional director of the FBI and collected the files. He says the case is now under federal jurisdiction and that we'll be told if any assistance is needed."

"And the police stood still for that?"

"There were a number of phone calls made. Not the least of which came from Langley, Virginia. You know how far right Chief Federman is. He was more than happy to cooperate."

"Chief Federman makes Nathan Hale

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look like Benedict Arnold—I just wish he was as down on crooked cops as he is on communism and Iranians." I sat down on a convenient boulder. "I should have seen it coming."

"You know why they're doing this?"

"Sure. Someone has been using a laser, or something like one, to kill. A weapon of very substantial power. So, where did they get it?"

Carson nodded slowly. "Either they stole it from our own government or . . ."

". . . they built it themselves, displaying an intimate technical expertise which was either stolen, bought, or developed separately." I nodded at Carson. "Whatever the case, our esteemed government is interested in how the monster that fried the Tapager family was obtained." I crossed my arms and looked at Bawcomb. "So what are we going to do, boss?"

Bawcomb shook his head. "I don't know. The police department doesn't know about you or the documentation in your possession, so the NSS and the FBI don't know about you, either. What do you think?"

"You know my past."

"Yes."

"I've seen too many things covered up in the name of 'security'. That's why I left the Agency. I'd like to finish this thing. After all, I'm still trusted by quite a few people in the Company. Better I should uncover something, than a hostile."

Bawcomb grinned. "Good. I want the killer on this one bad, Larry. Something about dead children gets to me on a very basic level."

"I know what you mean."

Take the monolith from *2001*, up the scale by one hundred, and put it in the center of our fair city. You would have the MacDonald Tower, thirty-five stories of concrete, steel, and mirrored glass. I stared up at it through sunglasses from the edge of the street.

"That's five-fifty, bub."

"Huh? Oh, here. Keep the change." I gave the cabbie a ten dollar bill.

"Thanks." He pulled out into the stream of traffic and was gone. I took a deep breath and headed across the plaza to the lobby.

My reflection in the glass door was strange, unfamiliar. I was dressed in an extremely expensive suit and I carried a Haliburton briefcase in my left hand. The expression on my face was that of a serious, ambitious, no-nonsense young executive—in other words, completely artificial. I just hoped the leasing agent wouldn't think the same thing.

The building directory guided me to suite 301 on the third floor. I took the elevator up. The sign on the door said,

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MANAGEMENT CORPORATION

I pushed in across acres of carpet and gave a business card to the receptionist.

"I'll take this right in, Mr. Caversham." She gave me a quick once-over and a smile. I did my best to look bored. She gave a minuscule shrug and disappeared into a back office. She came back almost immediately.

"Mr. Szymczak will see you now, Mr. Caversham."

I gave an impersonal "Thank you" and walked through the door she held

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open. Leonard Szymczak stood by his desk and extended a hand.

"Good to meet you, Mr. Caversham. I hope you had a pleasant flight from Houston?"

"Call me Larry, Mr. Szymczak. The flight was fine."

"Good, good. Call me Leonard, if you will. Sit down, sit down." He sat down behind the oak desk and folded his hands. "I can't tell you how pleased my associates were when I told them of your call. Although we anticipate no trouble in filling the building, a company of Grey and Shoot's standing in the building would be quite a boost."

"It's nice that you feel that way. More than anything, we're looking for a responsive building management in selecting the site for our new branch office."

"How many employees will be at this branch?"

"We anticipate eighty-five or so . . . for starters."

I could see the wheels start turning in his head. "How many rooms were you considering?"

I waved an arm idly. "Oh, I don't see how we could possibly do with less than two floors."

His eyes widened. "That much?"

"Well, we'll be putting in a lot of equipment as well. Data processing, communications, computer-assisted drafting equipment, etc. That's one of the things I'm checking on: your ability to deliver that much power to one area of the building." I gave a deprecatory shrug. "I'm sure provisions were made for such wiring?"

"Of course. It'll just take a little time. Would you care to see some floor plans?"

"Please."

Szymczak pulled a loose-leaf binder from a drawer and deftly flipped it across the desk so that it stopped facing me and open. "The only floors that aren't leased and adjoining are the eighth and ninth, the sixteenth and seventeenth, and the twenty-third and twenty-fourth. Unless you were considering non-adjoining floors?"

I shook my head.

He reached behind him and opened a cabinet. "Here is a set of building blueprints. I'm sure you'll want to give your colleagues back in Houston an idea of the Tower." He handed me a bundle of folded prints five centimeters thick. "Some of those prints show how our other lessors plan to modify their office suites."

Szymczak stood. "Now, why don't we take a tour of the building?"

"Sounds good."

"Hello?"

"Carson, this is Larry. Why don't you take a walk toward the Botanical Gardens."

"Okay. Ten minutes?"

"Fine."

I hung up the pay phone and stepped back out into the bright sunlight. The day was getting much too hot for my expensive suit so I slung the jacket over my shoulder and loosened the tie. Then I walked around to the back of City Hall and let myself in the service entrance with my key. I went up the enclosed fire escape three and a half floors and sat on the step. In the promised ten minutes,

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Carson came down from on high and joined me.

"My, aren't the gardens lovely this time of year?" It was our standard joke.

"Wow. I've never seen you so dressed up before. Sharp, really sharp."

"Thank you."

"Well, what's up?"

I shook my head. "I just took a tour of the MacDonald Tower. Something's been bothering me ever since I saw the video tape. Why do the windows open?"

"Huh. Did they give you a reason?"

"Yes."

"Did they give you a *good* reason?"

"I don't know."

Carson nodded thoughtfully. "Maybe you better tell me the reason and then we can both wonder."

"The building is studded with pressure sensors on the outside. In the fall and spring the goal is to ventilate the building by opening windows at the corresponding high and low pressure areas. This is one of the projects that was funded by the Department of Energy. According to the leasing agent, the thing isn't working very well at all." I shrugged. "That caused something else to occur to me. The Tower is covered with reflective glass. What if they bounced the laser off the Tower and to the Tapager Building? If that's possible, the laser could have been fired from anywhere on the south side of the city."

"My God."

"Actually, the reflectivity of that glass is only eighty-five percent and thermal shock would probably shatter the glass. *And* the glass on those surfaces is only vaguely flat. If you bounced a laser off of it, the beam would diffuse to the point that no harm would be done."

"Then what's the worry?"

"What if someone manufactured an optically perfect mirror and hung it from the roof or out an open window at the appropriate spot?"

"Shit."

"You said it, not I. They'd have no trouble hiding such evidence. Who'd notice a mirror hanging on a wall of mirrored glass?"

"Well, what now, Lawrence?" Carson shook his head. "Have you considered trying to find Bishop and working from there?"

I shook my head. "He's had ten years to bury himself. My only lead to him is this weapon."

Carson shook his head. "My kid was playing in the backyard yesterday and I went out to join him. I shouted at him. I've never shouted at him before—he was frying ants with a magnifying glass."

I shuddered. "I used to do that. I bet we all did."

"Never again."

My side pained me unduly, giving me strange dreams. I floated and tossed, fevered. I felt things.

Picture me—I am the eagle in full stoop, dropping through the air, talons extended. The Titan's side is bare to me. His arms are encased in stone and he flinches at my descent, anticipating the impact, the ripping of skin and entrail. I am the eagle, the instrument of vengeance, the bringer of punishment, the giver of pain. I am the victim of his act and thus the taker of retribution.

Closer I come, knifing through the

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air like I'll go through his skin. I can see scars now, the crisscrossing of lines that mark the meals of yesterday. His face is impassive, but his body betrays him—flinching to the side, struggling to avoid the unavoidable. I scream my triumph, my own anticipation and stab, but, what? The talons rake across bare rock. The prison is empty, the Titan is gone. Dust stirs across the rock. I've been cheated!

And then I remember. Eons have passed since Hercules paid his call. With a mournful cry, I climb back into the sky and fly away.

Cold sweat, hot skin. I sat upright and walked into the bathroom. My head spun and I had to lean on the sink's edge to support myself. I groped for the light switch. The light flashed on and stabbed my eyes. I squeezed them shut and groaned. When my eyes were able I peered through narrowed lids into the mirror. Mirrors—always mirrors. My face was flushed and my eyes seemed sunken.

Somewhere, someplace, was a phone. I needed to call Carson and have him take me back to the hospital. I stumbled back out of the bathroom and across to the living room door. It was dark and I bumped into the end of the couch. Ha. I could make it. I backed up and edged to the right, moved forward, and tripped over that bloody Haliburton case. I stretched my length on the floor behind the couch.

"Shit," I mumbled.

The parquet floor was heavenly, cool. It drew the heat away from my skin. I gave a mental shrug and stayed where I was.

Curtain in five minutes, time for a drink, kids, and touch up that makeup. Blessed darkness. Oops, hit the footlights.

The first noise was subliminal, so quiet I couldn't even tell you for sure that I heard it. The second was deafening. They must have hit the door together, precisely timed. The footsteps pounded across the floor and into the bedroom. I jerked closer to the couch and froze.

"Dammit! He's not here."

"Check the rest of the apartment and shut the front door."

I heard one of them move back into the living room and then into the kitchen. The light from a flashlight splashed across the walls. "Hey, Leon. Look here."

The other one walked into the living room. "What?"

"Police files on the Tapager hit. I thought the boss got all these."

"So did I. These must have been copied before the unit was notified. Go down to that pay phone on the corner and call Leboyer. Tell him about this."

"What are you going to do?"

"I'm going to look for anything else. Keep an eye on the door to the building and radio if he shows up."

"Right."

The door opened and shut. There was a grating sound as the splinters at the door's edge were forced back into the jamb. Leon began rustling through the papers on my desk. I cautiously edged my head around the end of the couch and saw his friendly inviting back as he bent over the desk.

I started to rise, to attack, but as I put weight on my legs they began to tremble. I sank back.

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Whew. No dramatic over-the-couch dives for me this night. I crawled back to the end of the couch where the Haliburton case lay. Careful not to make a sound, I lifted it and set it further out on the floor where he'd be sure to see it.

I waited, wondered, lectured myself on patience. After the sound of desk drawers being emptied, Leon's flashlight splashed across the room at random. Then a glint from the shiny aluminum case must have caught his attention for he gave a low cry of triumph and approached it. I readied myself.

He bent to open it there on the floor, setting the flashlight to one side to handle the clasps. I used both hands, gripped together—it's the simple things that work.

I went through his clothes. A small walkie-talkie and .380 automatic became mine. His only identification was a driver's license for one Leon Shoen of Taos, New Mexico.

I walked into my bedroom, gathered clothing, and brought it back where I could don it while watching Leon. Dressed, I broke into my camping gear and found parachute cord. Then I cautiously trussed Leon with his hands behind him and linked them to his feet. While I was doing this the walkie-talkie came to life.

"Leon, I've told control. Do you want me to wait down here or come up?" The voice was distorted by the tiny speaker.

I didn't hesitate. "Come up."

"Right." The radio died.

Fifteen minutes later they both lay on their sides, trussed back to back, but where their hands couldn't reach each other's knots. I started with a pitcher of water from my refrigerator. They both woke up quickly.

Sputter, sputter, sputter.

"Good morning, Mr. Shoen, Mr. Smothers." Kelly Smothers is what the other license had said. He, too, had no other identification. "I'm sorry about your headaches, but we all know you don't play this game without taking chances." I stood where they could both see me, but only by twisting their heads uncomfortably. "Would you mind telling me why you choose to violate my rights in this fashion?"

Leon licked his lips. "It's apparent that a mistake has been made."

"Yes, I would say so." I waved Kelly's gun negligently. It was a 9mm Luger and looked more impressive than Leon's gun. "Why don't you tell me about this mistake?"

Leon looked anxious. "If you would just untie my friend and me, we would be more than happy to explain."

"Ha." I struggled with the temptation to put a bullet into the floor by his face. I was slightly dizzy, light-headed. My skin was heating up again. "Leboyer must have dragged the depths for you two. The NSS used to have the best-trained agents of any domestic agency." I heaped scorn into my voice and watched its effect on Leon. He kept his face impassive, controlled.

I shrugged. "I will give you this. You located me. How did this lucky accident occur? Were you watching the MacDonald Tower or did someone brighter than you turn me over to you?"

Both of them stayed quiet.

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I crossed to the phone. "What's Leboyer's number?"

Leon stayed silent.

"It's either Leboyer or the police. Either way, you get bawled out, so what's his number?"

Kelly spoke. "224-1511."

"Thank you."

I punched the numbers out on the phone. The phone rang twice and a familiar voice answered.

"224-1511."

I quoted, " 'When Heaven is about to confer a great office upon a man, It first exercises his mind with suffering. . .' "

There was an indrawn breath of air on the other end of the line and then, " '. . . And his sinews and bones with toil: It exposes him to poverty and confounds all his undertakings.' "

" 'Then it is seen if he is ready.' "

"Larry! How on earth have you been, you bastard? You still owe me fifty bucks from the colonel's poker game!"

"I owe you! You son-of-a-bitch, I won that hand. I had a straight flush, you only had four kings!"

"How do I know you had a straight flush? There weren't enough pieces of that deck left to make one card. Hell, I still have pieces of that table in my leg."

"So the Viet Cong were rude. Who pulled you out of that bunker? That's worth fifty bucks even if I didn't win. But I did."

He laughed. "God, it's good to hear from you. Where are you?"

"Well, right now I'm staring at two gentlemen named Kelly Smothers and Leon Shoen. Would you happen to know them?"

"What? Oh damn. The CIA liaison swore all his people would stay clear of this operation. I'll skin him alive."

"Don't bother, Paul. I don't work for them anymore. I'm the DA's special task force on organized crime and police corruption. I've been investigating Tapager and Associates for two months."

"Oh, really? I guess that's where all the information came from in the police report. If I'd known it was the work of just one man, I would have gone recruiting. We've been in the field two days and you were the first lead we got."

I smiled. "I'm real close to an answer on this thing, Paul. Do you want me to back off . . . or continue?"

There was hesitation on the other end. "Crap, Larry. If my boss found out he wouldn't understand at all. You're not even active intelligence anymore, much less NSS."

"Twenty-four hours, Paul. If I don't have it by then, I'll turn everything I do have over to you and give up." In twenty-four hours I was probably going to be back in the hospital. "Okay?"

"Okay. What are my men doing now?"

I looked at Leon and Kelly stretched out on the floor. "They're awaiting instructions from you."

"Let me talk to Leon."

I carried the phone over to Leon and pressed the receiver to the side of his head.

Leon said, "Yes, sir. Right away, sir." He looked at me. "He wants to talk to you again."

"Yeah, Paul."

"Twenty-four hours. You can reach me at this number." He hung up.

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Dawn, like thunder across the bay, etc. The sun was a flaming red ball reflected in the mirrored surface of the MacDonald Tower. I grimaced at the pain in my side. The leftover night air helped against the skin. Any hotter and I would feel capable of burning up a dozen or so Tapagers myself.

I stepped into the phone booth and dropped the requisite coinage. The phone rang six times and Carson was groggy when he finally answered.

"Hello."

"Wake up, Carson. There's work to be done."

"Muummrrphh."

"Right. I've heard that on Creature Feature." A part of me stood back and noted the partial delirium.

"What is it, Larry?"

"I need some information—as quickly as possible."

"Okay."

"Who controls the MacDonald Tower Natural Ventilation experiments? Where are they based? What was the weather like Sunday, when the Tapagers got fried?"

"Don't you remember? The weather was beautiful, crystal clear. Oh, yeah, you were in the hospital. I'll have to check on the rest of these, though."

"You've got half an hour, I'll call you."

I'd released Kelly and Leon an hour ago. They even shook hands . . . grudgingly. Leon never saw me when I hit him and I didn't tell them how I'd snuck up on him. Let them wonder.

I sat on the curb and watched the MacDonald Tower in the sunlight. Today was Sunday, one week after the event. One week since unimaginable amounts of energy had poured through that window in the penthouse. I wiped beads of sweat off my brow and rested my head on my knees.

"You all right, mister?"

A paper boy, enroute, had stopped before me. I lifted my head.

"Sure I am. Do you have an extra paper?"

"Sure, Mister. I always carry an extra."

I fished out a dollar. "Trade you."

"Deal."

I dug through the paper until I found the Sunday comics, the only rational part of the news. They got me through the rest of the half-hour.

"Hello?"

"It's me, Carson."

"The man in charge is Terrance Billings. He's the chief development engineer for Daedalus Enterprises. He has an office on the fourth floor of the Tower right next to the Building Control Center."

"Pick him up."

"What?"

"Pick him up."

"Why?"

"I won't swear to it, but if you take his fingerprints don't be surprised to find a different name attached to the record." The telephone dial wavered, distorted. I leaned back and closed my eyes.

". . . Larry?"

"What was that, Carson?"

"I'll get right on it. But we still don't know how he did it."

"Leave that to me."

I hung up.

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* * *

The guard didn't want to let me past the door. I finally pulled out the card from the DA's office and handed it to him. He let me in.

The sixth floor was as good as any. I stepped off the elevator and shook my head. The floor seemed to be still rising. I walked over to the wall of windows and pressed my forehead against the glass. Old Man Sol climbed higher and began walking from east to west. I pushed away from the glass and looked at the bulky hinge-latch mechanism.

A pair of wires led across the frame to the mechanism. In fact, every hinge-latch was powered. This fit in well with the story I'd been told about the alternate ventilation project. There'd have to be some means of opening the windows remotely.

Each pane was double framed with worm screws that would rotate the inner frame until it tilted down or up. Another set of worm screws would rotate the outer frame from left to right. A set screw on each frame was set to determine the exact extent of the opening. I pulled out my pocket knife and cut one of the wires. There was a bright spark as I grounded it and then the two frames rotated until two micro switches came in contact with the set screws, breaking the current. I stepped back and stared, slowly nodding.

There is a book of Japanese legends called *Fidelity in Revenge*. It wouldn't surprise me if Thomas Bishop had read it. The scope of the man's vision and his patience stirred unwilling awe in me. I pictured him going from window to window, over a period of months, and, protractor in hand, adjusting each set screw until each window opened to just the right angle—an angle calculated months in advance.

So my head wouldn't fall off, I carefully turned and went looking for a phone.

I used the security guard's phone to call Carson. He sounded excited. "Larry?"

"Yeah."

"Billings hasn't been seen since Wednesday. However, they found some fingerprints at his apartment and they're checking them right now against Bishop's."

"Was he scheduled for vacation or anything?"

"Well, not exactly. We've tried to get information from Daedalus but no matter how high we go, we get the same answer."

"What's that?"

"The boss makes his own hours."

"Oh, shit."

Carson gave a harsh laugh. "Yep. It seems that he was the head of the cartel that bought Culver Aerospace."

I nodded. "When he disappeared, he must have taken a lot of money with him. I'll bet that was the cause of the original dispute."

"Sounds reasonable. I might even go back to the hospital and ask Tapager. Oh, that's right. He went home this morning."

"What?!"

"They released him from the hospital this morning. He went home."

"To the penthouse? With Bishop still loose?"

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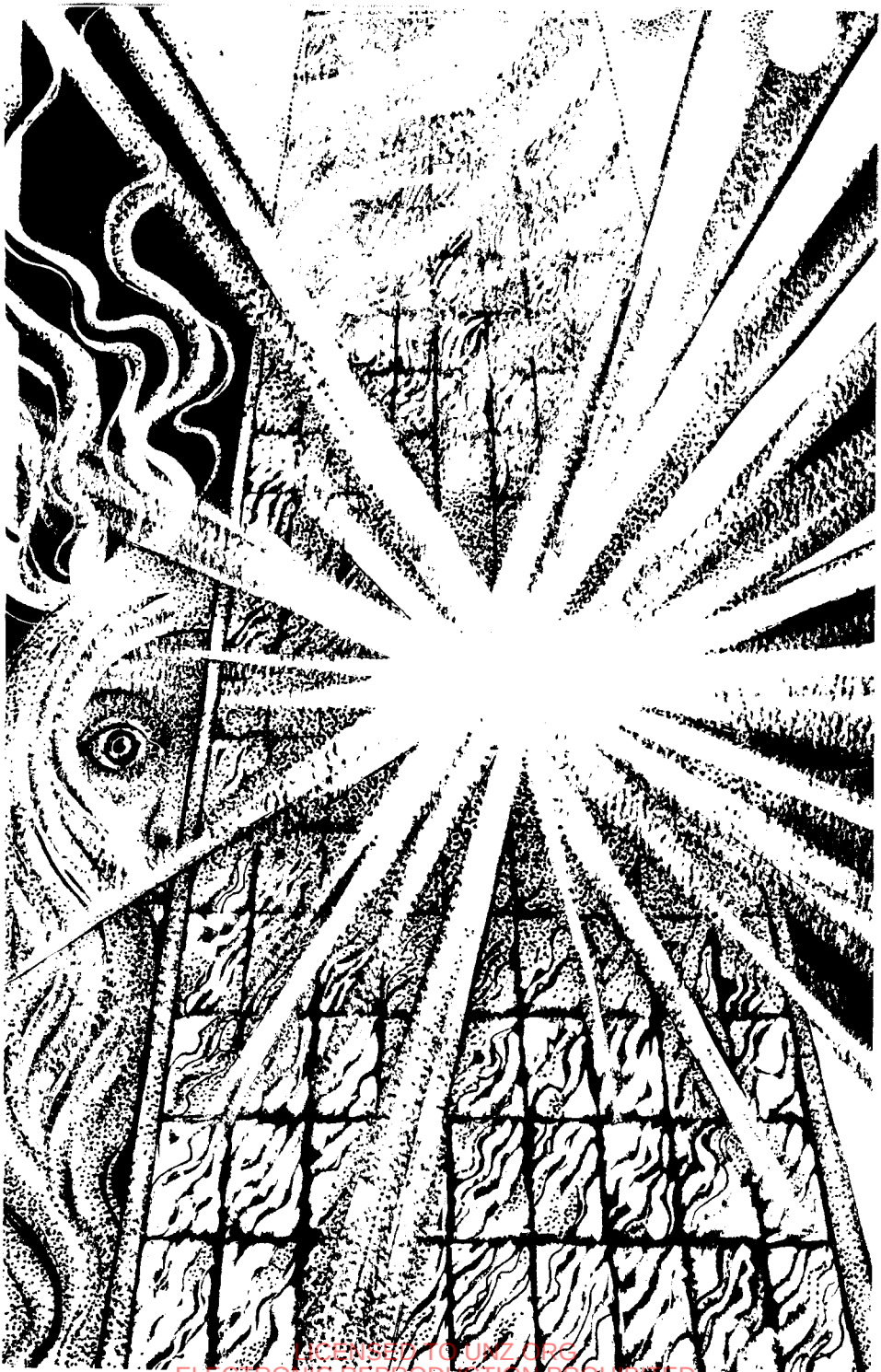

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"He's got a guard of the city's finest."

"What good would a guard have done last Sunday? Wait a minute."

I held the phone to my chest and turned to where the security guard sat. "Did anyone enter the building this morning besides me?"

"Several people. Some of the maintenance staff and a few of the lessors."

"Do you have a register?"

"Right in front of you." He went back to his needle work.

I looked at the desk before me. Sure enough, a book was opened to today's date with the signatures of several people across from the time they entered. Several of the people also had a time down for when they'd left. None of the names was Billings.

"Are you sure this is all the people in the building?"

"Well, there's Mr. Billings. He's in and out so often that if we'd made him sign the register we'd need one for him and one for everyone else."

"He's in the building now?"

"I think so."

I pulled the receiver back to my face. "Carson, Billings is here at the Tower! You better get someone over here real quick. And get Tapager out of the penthouse. I think Billings is going to do it again."

"How? We've never found a laser."

"He doesn't need a laser. He's got the sun."

The elevator stopped halfway up. No power failure. It just stopped. I leaned against the emergency button and swore. The world was spinning around and around and my shirt was soaked with sweat. I could hear a buzzing in my ears.

Damn. Double damn. I took a deep breath and shook my head. Then I jumped up and caught the little ring on the emergency access panel. It dropped down and I collapsed in a heap on the floor. I dragged myself to the control panel and opened the little door labeled "phone."

Luckily it was one of those that let you dial any number. I called Carson.

"Carson?"

"Yes, Larry."

"I'm stuck in an elevator."

"Are you still in the Tower?"

"As a matter of fact, I was on my way up to get Bishop. He must have cut them off from the control center." My voice cracked a little and the elevator seemed to tilt.

"Are you all right? You don't sound so hot."

"I'm don't think I could swim the channel right now, now that you mention it. Are the cars on the way?"

"Yes."

"Add an ambulance."

"For Bishop?" he asked.

"No, me," I answered. "And Carson?"

"Yes."

"If you can, get the guards at the Tapager Building to make some smoke out on the patio."

"What?"

"Have them take some rags and oil and trashcans and make as much black smoke as they can. We don't have much time until the sun is in the right position."

"I think I get you."

I hung up.

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Deep breathing. I gathered my feet beneath me and leapt. The hands caught, held. I swung and the entire world spun. I pulled and my side screamed. The knees caught on the edge of the hatch and I levered up into the shaft—fell to the side. When I was able to sit, I left a small patch of blood puddled in the dust on the top of the elevator.

The ladder was easy. One foot after another. Lift the hand, lift the foot, up the ladder, up the chute. Apparent vertical shifted like a belly dancer. It was very hot in the shaft.

The doors on the fourth floor weren't easy. I had to balance on that bloody ledge while I dug into the crack with my fingers and imitated Tarzan. My inner ear kept playing games with gravity and I felt like I was going to fall several times, but I huffed and puffed and finally pulled the doors wide enough to get through. True to form, I fell to the floor beyond the door.

They had a mirror by the elevator door. I pulled myself to my feet before it. My shirt, white cotton, poked from below my jacket. There was a red patch soaking the entire right side of the shirt. I grinned at myself and staggered down the hall.

BUILDING CONTROL

The sign was over a locked, but fortunately wooden door. I stopped outside it and leaned against the wall.

Rest, breathe deep, rest, breathe deep. I pushed myself away from the wall and put myself in *Zenkutsudachi*, the forward stance, squarely in front of the door. I ignored the noise in my ears and the swimming of the world. When I felt ready, I kicked forward, next to the lock, my weight moving forward. The door flew open and I fell forward, through it.

Death was waiting at a meter and a half off the floor. A stream of bullets poured at that height. God bless my fever, my legs refused to support me and I collapsed to the floor the minute I entered the room. The bullets flew by overhead. I turned over and let my bloody side show.

He came and looked over the counter at my body. I thought he was going to put a few more bullets in me, just to make sure, but he turned without firing and his footsteps moved away. I squinted through narrowed lids to see if it was safe.

Clear. I slowly gathered myself, then crawled to the end of the counter and peeked around. I saw a man with white hair leaning over a console. A television monitor showed a bright dot moving across the horizon toward a set of crosshairs. An Ingram machine pistol sat on the counter beside the screen. Various computer equipment hummed and chirped. I tried to ready myself for a charge, but the body is weak. My eyes, wide open, seemed filmed over with a haze of red. I started to fall, caught myself in time to avoid noise, and passed out, prone on the floor.

A voice was calling from far, far away. So who cares about Tapager, what about his police guard? Do you want to see the blackened, twisted lumps that were people? You have to wake up—save the day—save your life. I opened my eyes again and looked at the screen. The sun was in the crosshairs. And Bishop's hand was poised

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over a switch on a console. I managed to gather my feet under me and shook off a dizzy spell. Bishop clicked the switch and I jumped.

My plan was simple. My forearm was around his throat before he knew it and bearing down on the larynx, but he tucked his chin into the crook of my elbow, keeping my arm away from his larynx. I hung on and pulled at his throat, trying to put enough pressure on the carotid artery to make him pass out.

He slung both his elbows into my ribs, driving the air out and coming very close to the stitches on my right side. Still I hung on, knowing the perils of tiger riding. If you let go while the tiger still lives, you're dead. Bishop threw himself back against the counter, hoping to drive my back into the counter's sharp edge. I twisted and our respective left sides slammed into the edge. I kept squeezing. There was a pounding sound as someone tried to get in the door from the stairwell. I held on, even after Bishop threw us to the ground with me on the bottom. After that, Bishop couldn't rise with me on his throat.

Squeeze, damn it! I couldn't help thinking of all those reflective windows that were now rotating until they reflected the sunlight collected over two thousand square meters of mirrored glass into an area of four square meters on the roof of the Tapager Building. Magnified sunlight that killed people as surely as any little boy's magnifying glass killed ants. I hung on and kept squeezing.

Bishop stopped moving; his limited lungs were heaving, trying to draw air past my forearm. I risked a quick blow to his temple and then pushed him off me. Standing dizzied me incredibly. I fell toward the counter, slammed the switch down, and fell down an endless elevator shaft into darkness.

Remember intensive care? It was similar this time around so I won't bore you with details. I was there for three days before they moved me into a private room. Carson, Bawcomb, and Leboyer were all standing there looking at me when I opened my eyes one morning.

"Oh, my."

Leboyer spoke. "Hello, Larry. Got my fifty dollars?"

"Go to hell." I managed a weak laugh. His laugh was stronger.

Bawcomb smiled. "You did good, Larry. Very good. The trial of Thomas Bishop will be a joy to prosecute."

"And Tapager?"

"Tapager's dead. He had a heart attack Sunday morning. I guess the strain was too much for him."

"What about his police escort? Are they all right?"

"Sure are. There was so much black smoke pouring off the top of the Tapager building that the fire department called a three-alarmer. I'm told the smoke looked unearthly when the MacDonald sunlight shined on it. The temperature must have raised all of ten degrees in the penthouse during the time the Tower was focused on it. The smoke really cut out the reflected light."

"And heat," I added. "When will you start moving on Tapager's organization?"

"Two days ago. Surprise was almost total."

"Good."

"When did you realize that the Tower

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was just reflecting sunlight, Larry?" Carson asked.

"It was your comment on burning ants with a magnifying glass. For a long time that stuck in my head, but I guess I just thought a flat surface couldn't focus light. Then I remembered the window hinges. It doesn't matter if your lens is relatively flat as long as each pane of glass is reflecting the light at the same place. And from a distance of one and a half kilometers, it's no wonder that it cast shadows."

Leboyer smiled. "Not too shabby, Larry. Anytime you want back in the circus, you just call. I can come up with a mission tailor-made."

Bawcomb looked sideways at Leboyer. "It is our fervent hope that Larry will stay with us."

I laughed, stronger than before. "You make me feel better, both of you. I'll make a decision when I get back from my vacation."

Paul smiled. "Where are you going."

"Jamaica."

"Oh? For the gambling or the diving?"

"Neither. All this time in the hospital is ruining my tan. I'm going for the sun." ■

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Martin Harry Greenberg

DIMINUTION

There seems to be some confusion about who wrote this, but...

Dr. Stanley Schmidt, Editor
Analog Science Fiction/Science Fact

Dear Stan:

It was good to see you in New York and, as I hinted then, I'm just about ready to make the plunge into fiction. . . .

I enjoy editing science fiction anthologies and writing about the field, but *real* fulfillment will come when I touch all the bases.

Let me query you on this before I go ahead: I'd like to try a humorous short-short about a race of vegetable vampires who terrorize Sauk City, Wisconsin. The protagonist finally solves the problem by driving a filet mignon through their hearts! (A *steak* through their hearts, get it?) What do you say?

Hopefully,
Marty
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Mark Greenstein
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Greenstein:

Always glad to hear from a potential newcomer but the story's been done . . . it is called "Eripmav." Damon Knight wrote it and it was published in the '50s. It's been put on T-shirts, actually.

Sincerely,
Stanley Schmidt, Editor
Analog Science Fiction/Science Fact

Dr. Stanley Schmidt
Analog Science Fiction/Science Fact

Dear Stan:

Sorry the query didn't work out, but why the formality? We've been friends for years; don't you remember my office visit just six weeks ago? Someone else must have been on your mind since you botched both my first and last names (to say nothing of leaving out my middle initial). Funny that I never heard of the Damon Knight story, but these things happen. Serendipity, right? Here's another idea, another short-short (I would be happy to debut modestly): How about a scientist who has developed a device that will reverse the flow of time? He tests the device, and the story (it will be *quite* short) ends like this: "Smith moved the lever and the machine began to hum hum to began machine the and lever the moved—"

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Not too bad, huh?

Best as ever,
Marty
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Marvin E. Greenwald
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Greenwald:

Thanks for the story concept but this one's been done too . . . in fact it's a classic story by the late Fred Brown called "Nightmare in Time." Don't feel too badly . . . after all, there have been *thousands* of science fiction stories published in the last fifty years and no one individual could be expected to know them all, right?

Sincerely,
Stanley Schmidt, Editor
Analog Science Fiction/Science Fact

Dr. Stanley Schmidt
Analog Science Fiction/Science Fact

Dear Stan:

Come on . . . at least get my name right. I'm not oblivious to the humor of my position, but you above all should appreciate how much publishing an SF story would mean to someone like myself, who has been diligently reading and working in the field for almost three decades.

And I've never heard of Fred Brown's "Nightmare in Time," and that is strange, because I would be hardly likely to miss a so-called "classic" story. My *specialty* is unearthing previously neglected masterpieces. There is an undertone to your letter which I do not like. Perhaps I misperceive.

But, undaunted, I try again: perhaps the short-short is too difficult a form for me at this nascent stage. So how about a conventional-length short story about a sort of vampire who preys on his victims by draining their *emotions* out of them? The details are a little uncertain at this point, but I'm sure you'll note that the concept of feeding on human pain is truly terrifying and will provide for considerable dramatic tension.

All I'm asking for is a little encouragement.

Sincerely,
Marty
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Melville J. Greenberburg
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Greenberburg:

I'm beginning to think I've carried you far enough. Are you kidding? The story is "The Mindworm" by the late and deeply lamented C. M. Kornbluth. Very well known. Perhaps you should devote yourself to reading for your so-called anthologies for a while before querying us again.

Sincerely,
Stanley Schmidt, Editor
Analog Science Fiction/Science Fact

Dr. Stanley Schmidt
Analog Science Fiction/Science Fact

Dear Stan:

What's going on here? "So-called

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anthologies?'' I've edited or or co-edited more than *thirty* and deserve at least the courtesy due a fellow professional. I've never heard of ''The Mindworm'' (and I'm a great admirer as are you of Cyril M. Kornbluth) and I can't find it anywhere.

And I will *not* go away, not just yet. How about this? I'd like to write something like ''A Crime in Time'' about a white-collar criminal who embezzles money and then goes back via time machine until the statute of limitations expires before returning to the ''present.'' He is thrown into jail, tried, and faces the judge's decision, which is ''Schine hides in time; no crime.''

How about it?

Sincerely,
Marty
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Mickey W. Greenston
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Greenston:

''A Crime in Time'' is ''A Loint of Paw'' by a guy named Isaac Asimov, who put it, ''A niche in time saves Stein.''

Sincerely,
Stanley Schmidt, Editor
Analog Science Fiction/Science Fact

Dr. Stanley Schmidt
Analog Science Fiction/Science Fact
Dear Stan:

I don't know what's going on, exactly, but I'm getting a little scared . . . not so much for me as for *you*. I've co-edited anthologies with Isaac and read his work from the beginning and I've never heard of ''A Loint of Paw.''

But look, there's a way out of all this, I've decided with grace and finesse. I enclose copies of all our recent correspondence which, with an appropriate ending, could constitute a bitter and amusing short-short.

The point would be, of course, that *I* live in a universe where the stories you cite were never written and you live in an alternate in which they *were*. Not that I believe that, of course. After all, it's only science fiction.

Sincerely,
Marty
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Melvin I. Greenbaum
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Greenbaum:

My doctorate is in the hard sciences, but as an educated man I'm confident that you should see a psychiatrist. This new idea is from a story by one Jack Lewis called ''Who's Cribbing?'' A question of more than passing interest in this unfortunate case.

Sincerely,
Stanley Schmidt
Analog Science Fiction/Science Fact

Dr. Stanley Schmidt
Analog Science Fiction/Science Fact

Dear Dr. Schmidt:

If you can't get my name right after

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four tries, I don't have to pretend to be your friend any more, either.

But we do have a terrific story here regardless, and as a professional I want to proceed.

Look, we take all of this correspondence and give it a *different* ending than you say Jack Lewis did (I cannot find his story in any index). Maybe that there are two Martin H. Greenbergs living close together in similar professions or something and they get confused. Or alternate worlds which intersect in the Midwest. Or something. Just a little nudge will push me over, as the bishop said to the widow.

Sincerely,
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Morris S. Greenfeld,
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Greenfeld:

Thanks, but we've just bought that story from Martin Harry Greenberg, an anthologist and professor of political science in Green Bay, Wisconsin. It's called "Diminution." One more letter from *you* and I call the cops, buddy.

Yours truly,
Stanley Schmidt
Analog Science Fiction/Science Fact

Professor Martin Harry Greenberg
University of Wisconsin-Green Bay
Green Bay, WI 54302

Dear Dr. Greenberg:

You are my last hope. The enclosed correspondence between myself and the Analog editor is self-explanatory. What do I do?

Sincerely,
Martin Harry Greenberg
P.O. Box 8296
Green Bay, WI 54308

Mr. Monroe Graynagel
P.O. Box 8296
Green Bay, WI 54308

Dear Mr. Graynagel:

Sorry to be so late in responding to your letter and enclosures. As you should know, my anthologies include very little original material, and "Diminution" would hardly qualify on that account anyway, since I wrote it. Which means you'd better not try to. Accordingly, I return your submission. What anthologies have you edited? I've never heard of you. Nor do I care to; I'm sure you follow.

Yours truly,
Martin Harry Greenberg
University of Wisconsin-Green Bay
Green Bay, WI 54302

■

● Homo sapiens is, it would seem, the only terrestrial species possessed of an unmistakable "sense of future." Man alone is fully and consciously exposed to the terror—and the promise—of all his tomorrows.

Dr. Robert W. Prehoda

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The Alternate View

SAVING THE FUTURE

Jerry Pournelle

I'm writing this from the eye of a storm. I can remember when I wrote books, back before I took up saving the space program for a living. Now I have a telephone surgically implanted in my ear while I pound out letters and position papers and exhortations. It is, in a word, budget time in Washington. . . .

Last week I was chairman of a remarkable conference. Some thirty top people of the aerospace community met for three days in Larry Niven's home. They came at the joint invitation of the American Astronautical Society and the L-5 Society; and they included astronauts, aerospace engineers, corporate vice presidents, academic scientists, business representatives, lawyers, and even a couple of students. They came from Seattle, and Boston, and Houston, and New York, and other places; and for three days we worked our tails off to develop a national space policy.

The meetings also included science fiction writers: Larry Niven and Poul Anderson sat in the conferences alongside Air Force officers and aerospace vice presidents. And of course there was me, and my colleague Harry Stine, writers with aerospace research backgrounds. Let me say at once that the experiment was an unqualified success. At the end of the conference we had scads of written documents, excellent papers summarizing what was said—and unlike most conference documents, these are readable. Even interesting. By the time this is published, the conference report will be available. I'll tell you how to get one in a moment.

First the good news. We developed a space plan, a rational path from here to 2000. It's feasible. We can do it.

More good news. They're taking us seriously in Washington. Of course some of you have good reason to know that, since you were part of the effort to get out the letters and telegrams of support. (And thanks; although you don't need my thanks. You've done something for the future.)

And more yet: we have solid evidence that President Reagan, and his budget director, David Stockman, stand four-square for science and technology and think space "gives a boost to our economy and our aspirations and imaginations as a society" (from a speech by Stockman).

Now for the bad news.

I don't know the final outcome as I write this, but my guess is that the 1982 space budget is going to be cut to the quick. Literally while I'm writing, the phone is ringing to summon me to a telephone conference strategy meeting. How can we save the budget?

I don't think we can.

Now for the heresy: we don't have to.

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First, understand David Stockman's reasoning. Ronald Reagan was elected president on promises to whack hell out of government spending. He is a man who takes promises seriously.

David Stockman was appointed with strong marching orders. "Be ruthless." He has to be. Everyone in Washington is for cutting someone else's budget. "My program is different," they say. Now of course we say that about space; moreover, space really is different. Space, like defense, has very strong national security implications, and good high-technology research always pays for itself.

From what I hear, Mr. Stockman agrees. We may even be his favorite item. And still I think he's going to whack us very hard, because if he plays favorites then the floodgates open, and everyone will demand an exception, and the budget will be out of control again.

So by the time you read this the space budget is going to be in shreds, and everyone on Earth will be after you to write Congress and save their program. The space movement will suddenly have hundreds of generals giving orders, hoping to flood Washington with cards and letters and telegrams; each item and mission will have its own campaign; and the result is likely to be chaos.

Worse yet, it's playing the wrong game.

Look: we've got lots of strength. We're better organized than we've ever been, and our organized strength is growing daily—but for heaven's sake, how can we compete with the big unions and the cynical power brokers? Every one of those will be making a maximum effort to get his particular program exempted from the general cuts. We can't win that fight.

No. We're going to have to live with the cuts. We're going to lose this battle.

But we can go win the war.

What we must do is save what's necessary for a good national space policy—and that we can do, if we're skillful.

Let's start at the top. The following statement was unanimously adopted by the AAS/L-5 Conference (which has become the Citizen's Advisory Council on National Space Policy).

TOWARD A NATIONAL SPACE POLICY
SPACE: THE CRUCIAL FRONTIER

1. The *rediscovery of progress* is a reasonable and feasible national goal for the United States in the 1980s.

Progress is possible. We do not have to accept limits to growth, but we do need specific strategies for progress. Growth requires investment and continuous expansion of the resource base.

The United States has a world mission. We influence by example; we are the showplace of freedom; and in the present era we must also be the sword and shield of liberty. To fulfill this role we must do more than survive. We must remain militarily, economically, and ideologically strong.

We need visible goals: a reason for the nation to exist. If we have no dreams and goals, we have no nation.

Insuring progress for ourselves and the world is a reasonable and feasible goal for America. Space activities can

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be a significant part of our rediscovery of progress.

2. The vast majority of resources accessible to mankind are NOT here on Earth. The solar system abounds with minerals and energy. Other nations are even now claiming those resources and developing capabilities for using them. If the United States does not compete, we will have effectively abdicated economic leadership to those who do.

There is more at stake than that. Space has very great military potential. Although no one is certain that strategically decisive weapons can be deployed in space, no reasonable person can be certain that they can *not* be. Space-based beam weapons may develop into reliable missile defenses. At the very least, the United States *must* retain the option to compete in space.

Space also has symbolic importance, if for no other reason than the United States made the "Moon race" critical to our national prestige. To abandon space after announcing its crucial importance hands the Soviets an unearned but enormously important ideological victory. It is obvious from their space activities that the Soviets realize this. We must, therefore, retain the option to move effectively and quickly into space.

Retaining that option is not simple. No one can be sure what capabilities will be needed. Our adversaries have more experience in the space environment than we do.

Since we cannot know which space capabilities may prove to be decisive, we cannot design robots or artificial intelligence systems in advance. The only truly versatile space system is man, and the only way to insure a capability to do a wide variety of tasks in space—including construction of the military systems that may be needed in future—is to make entry to and operations in the space environment routine.

We must continue both manned and unmanned exploration of space. Our survival may depend on it.

3. The "Revolution of Rising Expectations" coincides with the "era of limits" to aggravate international instabilities. Most of the world will remain poor in the remaining years of this century—and this is a "global village." The wretched of the Earth are very much aware that everyone doesn't live their way. World economic growth is not merely desirable on ethical grounds, it is very much in the U.S. national interest.

Rapid economic growth is not easy. It requires investment. It also requires technological growth and expanded resources. We cannot abandon technology; indeed, we must rapidly expand our entire technological and industrial base.

4. All the above factors combine to make space an important option. To preserve and increase capabilities for military activities in space, we must expand our space activities. If we are to extend our technological base, we must actively seek renewed interest in the hard disciplines of science and engineering. The economic growth of the U.S. and the world will be enhanced by exploitation of the space environment. Ignoring space abandons the major resource base of the next century.

5. Retaining space options is time-dependent. The lead time for space ac-

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tivities is long. Decisions made now have consequences stretching far into the future. Decisive programs must be undertaken now or many capabilities will be lost; and once lost, they cannot be regained without costly and wasteful crash programs. Much that we should accomplish before 1988 cannot be done without immediate changes in our national space policies.

6. The space question is crucial: if we do not preserve space options, we are betting national survival in order to save a minuscule fraction of the national budget. This is neither reasonable nor prudent.

7. It is also possible to make space pay for itself—indeed, to use space to feed a new period of rapid economic growth. The opportunities are there. The resources and energy are there. It is now obvious that some nations will gain great wealth from space. The only controversy is over the time scale.

8. If humanity survives at all—which we fully expect—then there is no doubt that civilizations in the centuries to come will spread across the entire solar system. As Arthur Clarke has said: Except for a fleeting instant in the beginning of history, the word 'ship' will mean space ship.

This generation can take mankind and freedom into the solar system. Much can be lost by delay; still more can be gained by beginning now. *The nation and statesmen who give mankind the planets will be remembered forever.*

If you'll buy that, then we can make some deductions.

If we're to use space resources—information, energy, and material—we have to get out there and do it. The "man in space" vs. "black boxes" argument becomes plain silly. Does anyone seriously contemplate automating polar expeditions? Is anyone mad enough to try opening a strip mine in Arizona, or an electronics plant in San Jose, or build a house in Bethesda through exclusive use of robots without human supervision?

Profitable space operations will need electric power, and lots of it. Large Space Solar Power Systems will be needed. Those same systems may economically be able to supply power to Earth; that's an option we should keep open and a technology to develop as insurance.

The quicker we explore the space environment, the faster we'll be able to develop profits. We've got to get out there and begin experimenting—and the Russians will be there ahead of us no matter how hard we try.

Thus we ought to begin construction of a Low Earth Orbit Base (LEO Base One, according to the conference report; Star Base One, to another group) with a view to completing it before the end of this decade; and we ought to begin design of a permanent Moon Base to be opened by 1995.

These are reasonable and feasible goals. They can be accomplished despite the budget cuts, if we start now.

And that tells us what to do tomorrow morning. It tells us what we must save when they cut the budget.

First principles: technologies are more important than missions. Choose missions that expand capabilities; put off those that merely exploit them unless

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they add directly to the resource base or make profits.

Keep your options open. Go after building blocks, solid foundations giving access to the space environment.

Agreed so far? Sound reasonable? But here's where it hits the fan. If you buy the above argument—and I don't see anything wrong with it (other than that I keep wishing we had plenty of money so we could do everything we want)—then . . .

Then GALILEO (the Jupiter Orbiter/Probe), and the Halley's Comet mission, and the Venus Radar Orbiter, are all outside NASA's budget. They should be considered purely for their effect on national security, and their funds ought to come from National Security Council requests. They are psychological warfare items. We want them. But they are *not* part of the NASA charter, for they do not lead directly to space profits, nor do they develop new capabilities; and if NSC won't buy them, they must be delayed.

Understand how reluctantly I say that. I love GALILEO, and I've fought hard for the Halley mission. Even so, if I have to lose something—well, Venus and Jupiter will still be there in twenty years. Halley—well, weeping and wailing does no good. If I must choose, I'd rather go to the Moon to stay than to fly close to Halley's Comet for a few days.

Maybe I won't have to choose. Maybe the national security people will buy the mission. But if not, then bite the bullet.

From the above, the order of priorities works out something like this:

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Begin LEO Base.
(Construction in space. Space suits. Material processing.)
Study Solar Power Satellite (SPS) technologies.
Work on a reliable inter-orbit system.
(Centaur. Exotic such as Space Electric Propulsion System.)
Prepare a Lunar Resource survey.
(Lunar Polar satellite: look for water ice.)

Now of course we don't abandon anything; but if we have to retreat, we make our last-ditch efforts on those priorities, because if we keep those capabilities, we can still win.

Now—if you agree to the above strategy, what can you do about it?

Three things. First, join the L-5 Society. I guarantee it's both effective and respectable. I'm on the board, and a bit in awe of my fellow members, who include Freeman Dyson of Princeton, Minsky of MIT, Robert A. Heinlein. . . . Don't think about it, just tuck $20 ($15 for students) into an envelope and mail it to L-5 Society, 1060 E. Elm St., Tucson, AZ 85719. New members will get copies of the Conference Report Summary. If you're already a member, get a recruit—and you'll both get the document.

The full Report can be ordered from L-5, but I don't know the price.

Second, write me care of the above address and ask to be put on the L-5 telephone tree. You can join that for free—it's not necessary to be an L-5 member. And we need you. Our arguments are rational, but we need political clout to bring them off. We need to make them *listen*, and those cards and letters and mailgrams are vital.

Third, sit down and write letters, right now, to the president and your congressmen. Say it's a bloody shame that we have to make choices like this; we want a space program to make the nation proud. Keep the drumfire going. Tell them space has friends.

That's three columns I've devoted to organizing the space community. I don't apologize, but next time I'll have a different subject. Meanwhile—write L-5 while you're thinking about it. Ad astra . . . ■

● We do not *know* whether the first replicators appeared in a "warm little pond" at the heart of a young comet or in the shallow seas of the young Earth. Indeed, although all life on Earth today is built upon the same basic replicator mechanism, involving the life molecule DNA, we do not know whether this was the original replicator system or whether some other system developed first and was superceded by the DNA system at a relatively early stage.

JOHN GRIBBIN

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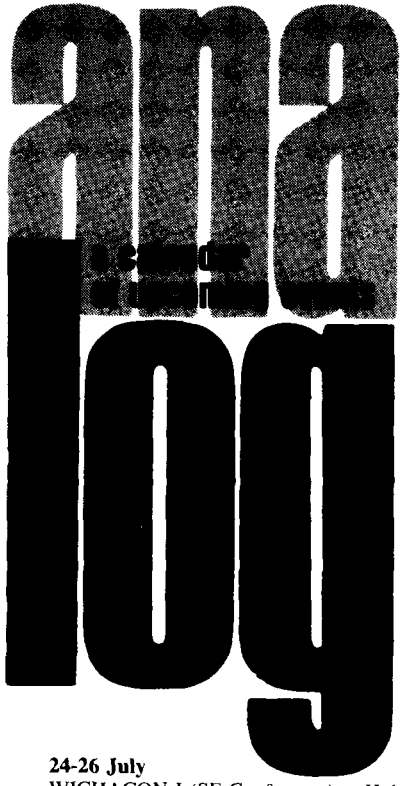

24-26 July
WICHACON I (SF Conference) at Holiday Plaza Inn, Wichita, Kan. Guest of Honor—Theodore Sturgeon; Art Guest of Honor—William Warren; Fan Guests of Honor—Walt Liebscher and Gordon Garb; Toast Gangsters—Pat and Lee Killough and Bob Tucker. Registration—$15. Info: Wichacon I, 211 North Oliver, Wichita KS 67208.

31 July-2 August
RIVERCON 6 (Louisville-area SF conference) at Galt House, Louisville, Ky. Info: Rivercon, Box 8251, Louisville KY 40208.

3-5 August
Conference on Pattern Recognition and Image Processing (IEEE CS) at Dallas, Texas. Info: PRIP, Box 639, Silver Spring MD 20901. 301-589-3386.

3-7 August
Symposium on Extragalactic Radio Sources (IAU) at Albuquerque, N.M. Info: K.I. Kellerman, NRAO, Box 3, Green Bank WV 24944.

7-9 August
SPACE: 1999 CON 4 at Sheraton Airport Inn, Atlanta, Ga. Info: International Space: 1999 Alliance, 86 First Street, New London OH 44851. 419-929-3351.

14-16 August
STUCON 1 (German SF convention) at Stuttgart. Sponsored by Science Fiction Club Deutschland. Guests of Honor—Marion Zimmer Bradley, David A. Hardy, Helmut Gabriel. Registration (U.S.$)—$18. Info: Jurgen Mercker, Eichenweg 24, D-7016 Gerlingen, West Germany.

24-28 August
Seventh International Joint Conference on Artificial Intelligence at Vancouver, BC, Canada. Info: Pat Hayes, Department of Computer Science, Mathematical Sciences Building, University of Rochester, Rochester NY 14627.

28-30 August
B'HAMACON II (19th Annual Deep South SF Conference) at Birmingham, Ala. Guest of Honor—Bob Shaw; Fan Guest of Honor—Hank Reinhardt; MC—Gerald Page. Registration $10 until 1 August, $15 thereafter. Info: B'Hama Con 2, Box 57031, Birmingham AL 35259.

2-7 September
DENVENTION II (39th World Science Fiction Convention) at Denver Hilton, Denver, Colorado. Guests of Honor—C. L. Moore and Clifford Simak; Fan Guest of Honor—Rusty Hevelin; Toastmaster—Edward Bryant. No mail-in registration after 15 July. Registration at the door—$55. Info: Denvention II, P.O. Box 11545, Denver CO 80211. 303-433-9774.

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Rick Wilber

THINKING OF ROMANCE

History is made by individuals—
and sometimes, for the individual,
the best part of wisdom is
knowing when to quit a blind alley.

Tarn b'Kosin watched the land below grow and swell in his viewscreen as the guildship descended, the straight lines and patterns of the city taking on individual aspects as his ship dropped through a cloudless sky. A small patch of green near the river became a park, a rather large park, surrounded by teeming city and throngs of the locals pointing up and staring. Then, watching closely, and as fascinated by the view on this twentieth trade-opening as he had been on the first, b'Kosin saw the flora separate out from a pattern of light green into individual trees and low-growth. And the locals too became individuals as his ship now hovered a few meters off the ground, checking the landing site for stability: individuals, although b'Kosin could hardly tell one from another despite variances in color and size.

b'Kosin knew that would come in time. He would learn to tell one person from another, and to tell a rowan tree from a sycamore, and a good trade from a bad one. All that would come with time.

For now, smiling, he relaxed as his ship announced it was down and that the landing site was a good one. Tarn announced the completion to his four passengers and they slowly began to emerge from the landing cocoons that encapsulated them from danger and turbulence. Another guildship would land the next day, and another the day after that, so that there would be twelve on the trade committee to open negotiations with the locals. Twelve, and the three co-pilots who, together with their guildship computers, flew the ships. Two of those three had no task here but to wait. The other, thought Tarn b'Kosin, was himself—and he would be as busy as ever, searching out the problems of this society while the trade committee strove to find the beneficial commodities.

He sighed. Always he felt tired as he began a new search. And this time he would be without his apprentice. Sharn a'Kosin was coupled with his own ship now. Tarn was happy that all had worked out so well for his apprentice, but missed the boy's company. He would, he promised himself, acquire a new apprentice as soon as he reached a civilized world. For now he would have to operate alone, seeking out the trouble spots in this society—the spots that might slow trade and profit for the

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Company. If he could, he would neutralize such problem areas. If that proved impossible, he would at least report on them to the Master Committee, and let the Committee send another agent to handle the dirty work. Occasionally smooth trade required the elimination of trouble spots. The Master Committee of the Company called the agents who handled such eliminations "trade specialists." b'Kosin called them assassins and was glad his own work was usually less violent. He had never killed save in self-defense.

Tarn b'Kosin, fourth-level guild recruitment member and native form advisement specialist, smiled. That was a show of friendship here, his native information implant informed him. An upturn of the lips at each side, with a slight show of teeth, meant friendly communication could commence.

It was a pleasant enough form of nonverbal language. He hoped to use it often. Smiling, and then frowning and then smiling again for practice, he left the viewscreen and walked toward the makeover room. These locals were humanoid also, and his makeover would be minimal this time—an addition of a few digits on the hands, an added lump of cartilage centered on the face, some facial and hair reconstruction, and he would pass as a somewhat strange but acceptable local. He had already acquired the language, of course, with the information implant. Now he had to put his knowledge to good use, and connect the implant's information with the planet's reality. He was confident he could pass successfully as what the natives might call "a decent enough chap, if a bit odd looking," as he sat in the makeover chair. He wanted the locals to find him friendly and treat him well.

And, for a while, they did.

Harry Stevenson was walking slowly, with his eyes cast down toward his feet, and so at first did not see the ruined cottage. Focusing only on the scattered pebbles on the shoulder of the road where he walked, he hardly even noticed the gradients he climbed and descended, walking out from Glen Shee toward the North Sea coast. His eyes saw just enough to help his feet negotiate the way. His mind, distracted by a tragedy far more personal than that which had befallen the cottage, wandered, trying to forget while remembering, always remembering.

And then the cottage beckoned. For no particular reason, perhaps just to ease the muscles in his neck, he looked up. And there, atop a small rise just forty or fifty meters off the road, sat the four stone walls that were all that remained of some forgotten crofter's home.

In different times, he thought, he could better have appreciated the scene. Distant Highlands were already snow-capped late on this September day. A small stream gurgled by, crossing under the road just ahead of him and then running by the cottage. The heather, just beginning to bloom, had reclaimed what had once been a garden to the side of the stone walls. And the cottage, facing west, was aglow in the northern sunlight of a dying day. Behind it a stand of pine trees dispersed the light into a pattern of shadows on the needle-covered ground. It was a beautiful day.

For two months now it had been so: cool but comfortable, the scenery de-

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pendably beautiful, and the Scots people he had met both friendly and understanding.

But his parents were gone, claimed by the riots. And Harry Stevenson, tall and slim and eighteen years old alone in a foreign land, had nowhere to turn except to the mountains and the sea. And so, for long weeks, he had been walking the Scottish Highlands, trying to make sense of outrageous tragedy, trying to find a place now where he could fit, a place where he belonged, a place where he could hide his sorrow and his grief and move onto something fresh.

The tragedy had stolen upon him with a sudden intensity, or so he had thought at first. Now, as he looked back on the summer, he realized his parents had seen more coming than he. If they had not sensed the riots were coming back in St. Louis, then why had they sent him abroad for the summer? And why send him to Great Britain?

Oh, he recalled, they had not been blatant about it. "Wouldn't you like to see your family heritage?" had become "Here are the tickets," which in turn had become "We'll see you in mid-September when school starts." And suddenly, still not believing it was really happening, he'd been aboard an aging but still capable British Airways Concorde—such extravagance! Then, a few hours later, he had found himself walking in the misty morning air of Edinburgh in May.

And he had enjoyed the summer. No doubt about that. The Scots had oil, and it showed. There were still cars on the roads and trains on the tracks and planes in the air, unlike the chaos at home. Everything seemed so orderly compared to life in the States. There were no food-lines here, with people waiting for ration stamps and then waiting again for meat. And there were no security guards at the gas stations either. There was no need in Scotland, or anywhere in Great Britain, to protect the rights of the few who could afford gas—everyone here could.

He had liked it; had been, in fact, seduced by it all—the wealth of the North Sea oil flowing into Britain's economy. "The New Empire" they called it, and dreamed in Scotland of glories past and new glories to come. The smell of diesel exhaust from the double-decker buses had greeted him that first morning with the unmistakeable odor of a country rich with oil and glad to show it.

And of course he had gotten used to it. Within days he was taking a hot shower and big breakfast for granted at each rooming house ("bed and breakfasts" they called them) where he stayed. And the trains, such a wonder at first, became routine as the days and weeks went by.

The first intimations of trouble at home had come in late June as he walked the Pentland hills, retracing the steps of Robert Louis Stevenson. He had heard, as he ate lunch, a BBC commentator talking about the farmer's march on Washington, D.C. The march had become a riot and dozens had died. The food situation would worsen, the commentator had said, as the impasse between America's farmers and the government continued. That night Harry had found himself in a pub, the White Horse Inn, in Edinburgh. There he huddled with two other Americans and a

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pair of Scots he'd met that day. The other Yanks too had been sent abroad by wealthy parents to avoid the summer of trouble back home.

The three Yanks and the Scots engaged in a heated discussion about what was wrong with America and how to fix it. The Scots had the answers, the Yanks had only the problems. Harry had been dismayed to find his two countrymen more than willing to disparage the States.

"Nobody wants to work. That's the problem," a short, fat one named Bob said. "They all want welfare and cars and TV sets, but they don't want to work for it." He'd held up his pint of McEwans to emphasize his point. The room was fairly cool, but beads of sweat stood out on his forehead. "My old man, he worked hard for his money. Twelve-hour days, six days a week, no vacations—for years. And now he's got the money and he can't buy anything with it. Damn rationing." His friend, blonde-haired Bruce, agreed. And the Scots pointed out, one of them quite vocally, that "You Yanks had it coming, lads. Ye used up your oil, ye used up your land. I'm tellin' ye, ye did it to yourselves." His friend nodded in agreement, and the two Americans agreed.

Harry did not. It wasn't that simple, it seemed to him. Until a year ago, until the day the aliens came, America had been getting along well enough. Not as high a life as the old days, his parents always told him. No. But getting along as each new crisis came: the oil shortages, the brown-outs, the stock market crash of '84—America had managed to cope with them all.

But then the aliens came. Twelve of them, in sleek silver crafts straight out of some 1930s magazine cover. They looked very close to human. Fewer toes and fingers and the visually disturbing lack of a nose were easily offset by their engaging smiles. And they were friendly too; they said something, that first day, gratifyingly like "Take me to your leader."

But they didn't say it from the White House lawn. They said it from the spot where they had chosen to land, a spot in Hyde Park not far from the Marble Arch. And they didn't want to be taken to the President; they wanted to see the Prime Minister.

The aliens, it turned out, were traders, opening up a new market. And they knew full well where the market was—and that was not in America.

It hit America's already troubled ego like a pin into a soft balloon, letting out its remaining air. America knew then that its second-class status was very much for real. The real troubles, the riots, the food problems and the depression—they all followed that landing. Funny, Harry had thought, sitting in that pub, that the Scots, afloat in oil-supported wealth and blessed with trade with distant stars, couldn't see from where America's troubles really stemmed.

But Harry had not been worried, despite the heat of the evening's argument. Not worried, that is, until a week later, when the riots in D.C. spread to Philadelphia, then Detroit, and Chicago, and then, inevitably, St. Louis. He checked with the American consulate in Edinburgh—the big, once-grand house on Regents Terrace—but the officials there could tell him nothing beyond

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check back tomorrow. The lists of dead and injured would be available then, perhaps.

So the next day he had walked back to the consulate from his bed-and-breakfast near the university. Crossing the Waverly Street bridge, looking back to his right, he'd seen the small mountain called Arthur's Seat that rises abruptly in the very midst of bustling Edinburgh. On the side of the mountain facing him was an ancient stone wall, all that remained of some forgotten edifice —destroyed, perhaps, when Cromwell sacked the city in the seventeenth century. It was the only building on the mountain; park authorities saw to that. To Harry, it served as something more than a scenic part of the park. It was a reminder that Edinburgh, though alive and well now, had had its difficult times in the past, times of tragedy and times of sorrow. But the city, like the rest of Scotland, had emerged from those times to become the oil capital of the west. The city—indeed the whole country—was a symbol for Harry of survival.

He needed that symbol later, when the consul general came from behind his desk to take Harry's hand and tell him St. Louis was in flames and Harry's parents were among the missing.

"The rich, those who were still there, either had adequate private armies to protect their estates or suffered the consequences, I'm afraid," he told Harry, patting the boy's hand. "Your parents' estate was overrun late last night. We've had no definite word on their fate, but it does not look good."

The consul general, a bookish man with thick glasses and a limp handshake, had put his arm around Harry to comfort him.

"They've wired you a great deal of money in the last week, my boy. A great deal. I've taken the liberty of depositing it in the Bank of Scotland for you.

"I know it's no consolation now. But you'll not be needy here. In fact, you'll be quite well off, really. You have no relatives left in the States; your parents told me that when they sent the remainder of the money."

He'd given the boy a hug. "They knew this was coming, Harry, and chose to remain behind and try to reason with the chaos. They thought their own popularity, their generosity in the past, would get them through this trouble . . . but it didn't. I'm terribly sorry. It just didn't."

Reason with chaos, Harry thought, as he pitched his tent by the "wee burn," giving the stream its Scottish appellation and smiling at the effort. The consul general had said it well. That covered the troubles at home: a simple outbreak of one of mankind's best social diseases—chaos.

So now he drove in the stakes on the tent's ropes and remembered his father's warmth on the day two months before when he'd given the tent to Harry.

"Take it," his father had said, pulling it from a musty chest in the attic. "I used it on my trip to Scotland." And then, standing up to look Harry in the eye, he had put one hand on the boy's shoulder, then stepped forward and hugged him hard. Harry had hugged back, but hadn't understood why. Now, as he tapped in the stakes, the moment came back and he knew what his father had guessed. Harry wished, looking out the open flap of the front of the tent an

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hour later as the twilight deepened into a cloudless night, that his father could know the tent still served well.

He slept lightly, half-waking often as he always did when he slept alone and in the open. He was easily brought to consciousness by night stirrings. There was something very uncomfortable, he had found, in not having the security of four close walls and loved ones nearby as he slept.

It was 2:00 A.M. by his watch when a slamming of two car doors and a squeal of tires from the road brought him awake. He heard a car roar off as he sat up in his tent, and then, from the direction of the woods, a moan.

Fully awake now, his heart pounding, he listened again, harder, but heard nothing else, nothing beyond the gurgling of the stream and the sigh of the night breeze over the heather.

Slowly, carefully, he crawled from the tent, emerging from the small opening on his knees, then standing quietly upright.

He wasn't even sure, now that he was standing and awake, that the car and the moan had really happened at all. As the moment of occurrence receded behind him, the sound became more fantastical and less real. Only the gurgling of the stream and the few clouds scudding by in the starlight seemed tangible and definite in their reality.

Harry left the tent, walking slowly across the dew-wet grass that grew thick here near the stream. It might frost, he thought, before morning. He could feel the cold wetness oozing through his tennis shoes, dampening his socks. Carefully, watching his step as best he could in the dim moonlight, he crossed the rocks that filled much of the shallow stream bed. With a minimum of splash he made it across the ten-foot width, and began walking carefully up the opposite bank toward the ruined cottage and the woods behind. Still he had heard nothing new, nothing more than the wind and the stream.

Then, as he reached the side of the cottage, the moan came again, from straight ahead now, no more than thirty feet into the woods. But the darkness in there seemed complete; no dim moonlight reached through the thick gathering of pine trees. The moan, he still thought, might have been something other than human—an animal perhaps, or just the wind.

Either way, Harry thought, he ought to check it out. If it was someone needing help, then he should help. And if it was just an animal, he ought to help the beast or end its pain. And if the wind alone was making that sound, that pitiful moan, Harry wanted to see the hole in some tree that issued such a moan.

So he walked to the edge of the woods, took the first step in. The darkness was palpable. He could hear it and feel it almost as well as see it. There was no sound in that darkness, no wind to stir his hair. The unreality of the moment and the place conjured up visions of brownies and elves and banshee wails in the Scottish night. He thought, in a part of his mind that persisted in calmly analyzing the situation while the rest of his thoughts tumbled through a rapid series of fear-inspired imaginings, that he would never again chuckle so easily when he heard some Scottish folk tale of a hapless shepherd carried off into the darkness by forces dimly felt

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but strongly feared. His own reality seemed to be staying behind in the relative brightness of a dim moonlit evening as he took another step into the woods. Even the pine needles carpeting the ground softened his footfalls so that they were nearly noiseless. But still he took another step, and then another.

And heard the moan again, much clearer now. And behind that sound another—this a low growl that sounded much like a cat, upset and angry. A back-of-the-throat growl. It brought Harry to a stop, frozen in the woods, unwilling to move against the menace of the sounds.

Harry strained to see into the blackness, hoping to make out something: a wounded man and a protecting dog? A hurt animal with its mate by its side? Something.

But nothing was there. And the silence returned. A minute passed, a long, long minute, counting to sixty to make it go by, hearing nothing. Then, in the quiet, Harry took another step, listening to the echo of his heartbeat, violent and quick, in his inner ear. A second step, and a third, and still nothing.

Then, feeling a tree in his way, he rounded it slowly, moving to his left. There was a small clearing in front of him, and the moon above threw dim light onto the soft turf. Not much light, but enough, by comparison with the total blackness of the woods, to allow him to see what was there. A huddled shape at the far end of the clearing, thirty feet away from Harry, and an animal of some sort at its side. Harry strained to see.

It was an alien, apparently unconscious. Its left arm looked to be broken and set rather badly, a rough cloth wrapping holding it close to the chest. Its face was bloodied, caked with dirt and blood that mixed in the dim light to form ugly splotches that ran from the left side of the alien's forehead down to the neck. The vertical slits that centered that face instead of a nose were also caked with blood and dirt.

The beast by its side growled as Harry approached. It was the size of a large dog, with a too-large head and oversize eyes that burned brightly. The eyes were watching Harry closely as he approached, and the beast growled as he took another step. The alien, hearing the growl, opened its eyes and moaned with the arrival of consciousness. It moaned, blinked, and saw Harry.

The alien smiled, an incongruous thing in one so different in form, but a smile nonetheless. Harry, in wonderment at his own calm in the face of something so awesomely different, smiled back.

"You're hurt," he said to the alien. He could think of nothing else to say, no other way to open any sort of communication. To be in the presence, in the actual presence, of an alien was far more than Harry had bargained for when he first stepped into the woods. Seeing pictures in the news magazines and interviews on the BBC was one thing; but to be looking at one, hurt and bleeding and in need of help, sitting just a few feet away—that was another thing entirely. Harry had no idea how to act, or what aid to offer. The alien, thankfully, did.

"Yes, I am," it said quietly, in a learned English, a too-perfect English that Harry knew well from the foreign

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students at home. "Could you help me?"

Harry took one more step toward the alien, and then was reminded of the beast at its side by a dark, low growl. The alien turned to look at the beast, then looked back at Harry. As he spoke the beast shimmered once, then disappeared.

"That was only an image," it said. "I have asked my ship to cancel it. The beast seemed to be frightening you."

"It was," Harry admitted. "Was it something from your home planet?"

The alien managed that smile again.

"No, it is from yours, an image conjured from a book by one of your poets—a thin little volume I read during my research. It was called . . . "

"*Songs of Innocence and Experience,*" broke in Harry. "I've read it. That was the tyger."

"Yes," said the alien, nodding his head. "Quite right. Very good."

"Why did you use it?" Harry wanted to know. Of all the beasts of the world, he was curious, why would the alien choose an image of Blake's tyger?

"Just for its shock effect," the alien hedged, sitting up a bit against the tree. "It's worked well before. Most people don't seem to realize what it means or where it's from. It was simply meant to frighten you off."

"It almost did," said Harry, bending down on one knee to look more closely at the alien's facial cuts and the battered left arm. It turned its head to the side and Harry reached out to touch a gash above the cheekbone.

"Ouch! That's sensitive, friend. Gentle, please."

"Sorry, I was just trying to see how deep the cuts are. A couple of them look pretty nasty. We ought to get you to a doctor and get them sewn up or something."

"No," the alien waved its hand. "I cannot do that. There is proper medical aid aboard my ship and it will be here soon. Could you just help me clean up a bit now? Perhaps some water from that creek we crossed as my 'friends' brought me here in their wretched little car."

"Friends?"

"SNPs," said the alien. "Scottish Nationalist Party. They wanted to make a point to me, a rather strong point, about how they feel about trade with other worlds."

"But why should trade bother them?"

"The same reason Scotland's oil glut bothers them, I suppose. They feel everyone else is making the money and Scotland is left with empty pockets."

"I've been around here for months. Their pockets don't look empty to me."

"Well, they obviously aren't, of course. But the SNP thinks things could be very much better still. This little warning to me," he gestured toward his face and held up his broken left arm, "was just to let me know quite forcefully, I suppose, just where the SNP stands on this issue.

"And," he touched a cut across the forehead, "they've succeeded admirably. Quite admirably. I think I understand them perfectly now."

He looked up at Harry suddenly, realizing for the first time that the boy was not Scottish.

"Where are you from, Canada? Does this SNP discussion make sense to you?"

"No. Yes. I mean, I'm from the

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States. But I know all about the SNP. They're the ones who want an independent Scotland. We've got groups like that in the States, too."

"Ah, the U.S.A. That's a land of some troubles lately, I'm afraid."

Harry said nothing, but remembered the social shock of the aliens' landing in Hyde Park the previous year.

"Well, thank you for the help," said the alien. "And I suppose I should introduce myself. Unless, that is, you're leaving right away." It smiled at Harry.

Harry laughed. He was not about to leave at this point, SNP rowdies or not.

"My name is Tarn b'Kosin, guildmember in good standing of trading committee research teams." b'Kosin reached out his right hand to grasp a firm shake with Harry.

"Hello, Mr. b'Kosin. I'm Harry Stevenson, from the States."

Harry smiled at the introductions. The handshake seemed a fitting conclusion to the seeming hallucinations of the night. He almost expected the alien to wink and disappear at this point, leaving behind a pot of gold and two cobbled shoes. But of course he did not. Tarn b'Kosin was very real, despite the fantastic quality of the Scottish pre-dawn. Very real, and in some real pain from his beating.

They talked, the lonely American boy and the visiting guild tradesman, for almost an hour. Using a shirt from his tent and the water from the stream, Harry helped b'Kosin clean his cuts. They seemed mostly superficial, although some cracked ribs might have to be added, Harry told b'Kosin, to the broken arm as serious injuries. b'Kosin warned Harry that, despite basic outward physical similarities, there were enough internal differences that only the medi-kit on his guildship would really be able to look him over adequately and properly set the break in his arm.

Their conversation, which took place as he gently cleaned the cuts, was surprisingly amicable, thought Harry. The alien seemed interested in Harry's past and appropriately sympathetic to the boy's tragedy. b'Kosin was well aware of the problems in the States, but had to tell the boy that things would not get better soon.

"Our committee here is terribly small, and our plans too limited, to involve America for quite some time, I'm afraid," he told Harry. "There really isn't anything for it." He smiled at the boy. "Such dislocation as you've described is common when we first arrive, Harry. I'm sorry. In the long run it will be good for this world as a whole, you must believe that."

Harry, frankly, really didn't care. He was more interested in the alien than he was in world, or even intergalactic, trade and politics. For the first time since he had heard of the riots at home, Harry was able to forget his sorrow in the excitement of the present.

And b'Kosin, too, enjoyed the conversation. For the first time in many months he was able to talk with little pretense and no ulterior motives. The youth was sensitive and bright, too, and that helped. b'Kosin had seen much of humanity's violent side during his months of work. It was a pleasant change to be involved in a conversation that wasn't aimed at causing strife.

"So," said b'Kosin, moving about a bit. "I suppose I ought to make this

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little haven in the woods as comfortable as I can while I wait. My ship will be here soon."

"I'll stay with you until it comes," Harry suddenly blurted out. "I mean, please! Please let me stay with you."

b'Kosin smiled. The youth was struck by the excitement and romance of the moment, but b'Kosin knew he could not subject him to possible danger. The SNPs might very well be back at any time, and this time to finish what they had started before. And if not the SNPs, then perhaps the military might arrive. No doubt the nationalists had informed the Royal Navy and Marines about the alien found hidden in their midst. In fact, b'Kosin frowned, that was probably the greatest likelihood: the arrival of some military types to try and capture him. Well, he comforted himself, now that he had warning of impending danger he could adequately protect himself. As for the boy . . .

"I'm afraid I simply cannot do that, young Mr. Stevenson. There is apt to be some danger here soon, and I really could not subject you to it. But thank you very much for your help. You've really been quite an aid."

"But how can you protect yourself if somebody comes after you? With an imaginary tyger?"

b'Kosin was speaking under his breath to his ship as Harry asked the questions. He turned back to the boy to answer.

"My ship has just dispatched a package that should help immensely in the face of further danger. It will be here in a few minutes. Now I think you really should go. And thank you again for your . . . "

His speech of regret to Harry was cut short by a high whistle and a small explosion above their heads, well above the woods. A bright white light suddenly hit the tops of the trees, fighting to disperse the shadows that still hid the two.

Harry frowned. "Is that . . . ?"

"No," shouted b'Kosin, scrambling back out of the clearing and into the underbrush at its edge. "That's the Royal Army or somesuch. Quick. Get out of the way," he motioned to Harry.

Harry half-dove, half-crawled out of the clearing and into the deeper shadows. "But why? So soon? How?" He couldn't force out an intelligible question in the daze of light from above and the chatter of voices he could now hear from outside the woods.

"I'm quite sure the SNPs have set them on us, Harry," said b'Kosin. "And there isn't much we can do about it unless that equipment arrives, on time and on the right spot."

Shouts from outside the woods now called out to b'Kosin to come out quietly. Then, after a moment's silence, Harry's name was thrown in for good measure. They had found his tent and empty sleeping bag with his name on them, and concluded he was in the woods too.

"There will be no harm," promised a husky voice amplified through a speaker. "Just come out slowly. We have proper medical attention ready for you."

"So they know I'm hurt, too," muttered b'Kosin. He mumbled under his breath and then smiled at Harry. "This should be interesting, lad. Watch what happens right . . . now."

The military had sent up a second

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flare by this time, but its brilliance was suddenly eclipsed by a light so bright it penetrated even the shadows where Harry and b'Kosin lay hiding. A thunderous boom followed the light, and then a rush of air that filled the ears with sound. Then total darkness and silence. The arrival of the rescue pod had blown out the military flare and dazed the soldiers surrounding the woods so that they were momentarily silent.

Harry opened his eyes in the darkness to see the dim shape of b'Kosin opening a hatch in the side of a two-meter-long rectangular box that now sat beside the alien, glowing and humming softly, and apparently cool to the touch despite the raucous arrival.

b'Kosin suddenly leaned back and smiled at Harry, that winning smile that seemed too manufactured to be real, but certainly to have a motive at this point. From the box a bubble of light emerged, a bubble that grew quickly from a glowing point no more than a foot across to a half-bubble, like a soup-bowl overturned, that covered the box. Then it grew again, in a sudden burst, to cover both Harry and b'Kosin. Harry felt a slightly chilly tingle as the edge of the bubble grew past him. It kept expanding for another few seconds, in fitful bursts that only quit when it was about the size of a small house about twelve meters high, covering them both with room to spare. Harry said nothing as he watched it grow. b'Kosin just continued to smile.

"We're quite safe now, Harry. There's nothing on this planet that can penetrate this unless we want it too."

"A force field?" Harry conjured up the term from his science fiction class in high school. It seemed fitting that such a class should supply a term for something this outrageous.

"Something like that, yes," said b'Kosin, smiling again.

"How long will it last?"

"For years, I suppose," said b'Kosin. "I've never really had occasion to find out its duration. Shan't this time, either, I'm afraid. My ship should be here soon, another twenty minutes or so. And at that point . . . ah." He interrupted his own conversation to point at the edge of the bubble.

A soldier was approaching it hesitantly. Dressed in British fatigues, with a red beret and red armband, he walked up to it cautiously and touched it with the butt of his rifle. The bubble gave a bit, then held. The butt had entered the field for perhaps half a foot before being stopped. Harry, worried, turned to look at b'Kosin, but the alien looked unconcerned.

The soldier pushed harder, but could get no further with his penetration. Then, as more men arrived, he waved them back with his hand, took five good paces back himself, and aimed to fire.

"No!" said b'Kosin, raising his hand to stop the shot. But he was too late. The soldier fired and immediately crumbled to the ground, grabbing his shoulder as he fell.

"The screen returns the energy," b'Kosin yelled at the soldiers. "Please, it is a one-way screen. We can exit, but you'll be unable to enter. You will not be able to penetrate and may cause yourself even more harm." He turned to Harry. "Walk over to the edge, would you, and see if that man is hurt very badly."

Harry rose from his stunned crouch

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and walked to the edge of the bubble. Within a foot of its edge he could feel the chilliness of it again. He looked over at the group gathered around their fallen mate. Two of them had weapons aimed at Harry.

"Walk out of there slowly, lad," one said, bringing his rifle to his shoulder to aim at Harry.

"No," said Harry, shaking his head slowly but firmly. "I'm staying inside. He," he pointed back at b'Kosin, "asked me to check on him and see if he's all right."

"He'll live," said one, looking down at the wound in the first soldier's shoulder.

"Is he hurt badly?"

"That slug was a riot design, lad. Designed to stop but not to kill. It hit at an angle that tore him up a bit more than it should have, but otherwise he's all right."

Harry turned to tell b'Kosin the man would live. The alien, standing now and leaning against a tree with his good arm, simply nodded as he heard the news.

"Why not come out of there, lad?" a soldier, the tallest of the group, asked again. "You're not the one we're after anyway. It's him." He pointed his rifle at b'Kosin.

"Why?" said Harry. He looked at the soldier, outlined in the glow from the screen. His beret said *Royal Marines, KOSB* across the side—from the Arbroath Marine base, then, thought Harry. He had watched the gliders train there just two weeks before. "Huntleigh" was the soldier's name, printed across his left breast pocket in white against a dark green background, over the fatigue camouflage design.

Huntleigh looked at Harry more closely. The boy was an unexpected complication to what he had hoped would be an easy enough assignment for his men. They were a battle-tested unit; had fought in the oil wars at the Straits of Hormuz against the Cubans and Russians and come out winners. Catching one alien who had been sneaking around Great Britain for months seemed easy by comparison. But he hadn't, thought Huntleigh, been counting on things like this defensive screen, whatever it was.

"This alien is a spy of some sort, lad. Been traipsing around Britain since the landing, apparently, rousting up trouble. We got a tip a few hours ago that he was here. Orders to capture him came straight from Whitehall."

"A spy?"

"Right. Not one of the official party. And now, unless you help us, you're in it too, lad. Sticky mess. Things would go better if you'd help us roust him out of there."

Harry thought about the implications of his action. If b'Kosin was a spy of some sort, then perhaps the whole story about the SNP was a fabrication—in which case he ought to walk out. The other possibility, of course, was that the SNPs had called in the "tip" to the Marines, and that b'Kosin was telling the truth right down the line. That seemed the most likely course of events to Harry, but he couldn't be sure. He turned to face b'Kosin and slowly walked toward him, away from the screen and Huntleigh and his cohorts.

"They say you're a spy," he said to b'Kosin as he reached a spot about three meters from where the alien stood leaning against the tree.

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"I am."

"They say you've been stirring up trouble for months. That they had a hot tip tonight that you'd be here."

"Harry," said b'Kosin, smiling slightly, "I am a spy, of sorts. My job here is to ferret out trouble spots, groups that might cause us trouble. To do that I have to go undercover. If that makes me a spy, then that is what I am."

"They," Harry motioned toward the Marines, "say you've caused the trouble with the SNP. You say you're trying to stop it."

"I am a guild trader, Harry. I work for a trading company, and perform according to guild law. That is a law that might not always agree with local custom, but it is a law by which I must live. Beyond that, I cannot say much. But," he looked out at Huntleigh and his Marines, "you might ask yourself, lad, which of us has the proper motives.

"I'm here to help the company make a profit with trade to this planet. Typically, trouble gets in the way of profit. So naturally, if you stop to think about it, I wouldn't want trouble. They, on the other hand, are professional soldiers responding to an order. They will try to get me any way they can, even if that includes lies or half-truths to you to get you to help them."

Not only did b'Kosin make sense, thought Harry, but he had to admit that he wanted, emotionally, the alien to be right: to be telling the truth, to be the one to trust. Until a few hours ago his life had been on a downhill slide, Harry thought, and then this alien had come moaning and in pain into Harry's life and things had changed faster than he could have dreamed. b'Kosin offered, Harry thought, an escape from the second-class status of his life.

He almost had to laugh aloud at himself. He had always been given to self-analysis, and knew now that he was thinking of Romance, the capital "R" Romance that included space operas and swashbuckling adventure and beautiful girls on distant planets—and he knew that all such thoughts were the escapist thoughts of an eighteen-year-old in need of dreams to escape from a tawdry reality. He knew what he was doing to himself with his dreams of the worlds that might be out there but probably weren't. He knew he was deluding himself with a young man's dreams in the face of the ugly present reality. He knew it, as he analyzed it, and of course he didn't care.

"I believe you," he said to b'Kosin. "I believe you, and I want to go with you."

"I'm sorry, lad. I've told you, that just is not possible. . . ."

"But you must," Harry insisted, pleading, with urgency in his voice. "If you leave, and I'm left behind, how do you think they'll treat me?" He glanced over his shoulder toward the Marines. "They'll interrogate me and follow me and question me for the rest of my life.

"And," he looked b'Kosin in the eyes, "I don't have anything here anymore. Anything on Earth. My parents are gone, my country in a shambles. I don't belong anywhere; I don't belong to anyone, or with anyone. I'm alone. No one will miss me, no one will wonder where I've gone. Please."

b'Kosin looked at the boy. He wasn't exactly the type b'Kosin usually chose for an apprentice. He was too tall, for

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one thing, and thus would be hard to make over for any number of assignments. And he was an Earthling, for another. And these Terrans had not impressed b'Kosin with either their level-headedness or their native intelligence. But, he thought, the boy had desire, and, importantly, no ties to this world other than those of emotional attachments to home.

And, b'Kosin had to admit, a large part of the boy's current troubles with these local military types was, after all, b'Kosin's fault. He should never have allowed the boy to help in the first place. But now that he had . . .

"All right, boy. I'll take you aboard the ship. I may even try you out as an apprentice. But you must understand what that means before you go. You'll never see home again, in all likelihood. You'll never see Earth, nor the States, nor your home in . . . " he hesitated, remembered, "St. Louis. That will all be behind you forever if you come along with me."

Harry thought about it. About the future and about the past. And, as he thought about it, he heard a distant scream in the sky, a scream that grew quickly in volume.

"You must decide now," said b'Kosin. "My ship is coming, and he cannot wait for a boy's decision. Yes or no. Decide now."

The scream grew in intensity, until it filled Harry's head with high-pitched noise. And then Harry realized that the scream might be his own if he stayed behind—always there, filling his head with thoughts of what might have been and never was. And he knew he had to go, had to take the chance, to grab at Romance, although he knew the reality would be far from his vision of heroics.

"I'll go," he said to b'Kosin. "Please, let me come along. Yes, I'll go."

And Harry Stevenson had a momentary glimpse of b'Kosin smiling again, a broader smile this time. And a thought briefly crossed Harry's mind that the screaming could also be his own, as he entered this alien future. But he faced that thought and forced it back. And the scream of the ship seemed to break upon them like a wave rolling over the pebbles on a North Sea beach, and suddenly it was dark, and suddenly it was quiet, and Harry Stevenson was in the stasis field of b'Kosin's ship as it scooped them from their woodland retreat and headed back toward orbit. Harry Stevenson, tall and slim and eighteen years old in an alien land, was now an apprentice tradesman. And the future waited.■

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S.C. Sykes

THE CYPHERTONE

A first principle
of education
is that
"you have to get their attention."
But is there
such a thing as
too much attention?

They were all the rage that Christmas. The computer game bombarded TV ads and left children clamoring and nagging parents for the new-age toy. Dan Morgan, remembering how hoola hoops had swept his neighborhood like a colorful tidal wave when he was a kid, gave in and bought a Cyphertone game for his nine-year-old son. It was a deceptively simple game, Dan mused, as he watched Jarrod shred the wrapping from the box. Designed like a pie-sized black flying saucer, the computer game challenged one to repeat an increasingly complex pattern of flashing lights and sounds. Four colors—red, blue, yellow, and green—flashed in ever-changing random sequences, accompanied by four electronic audible pitches.

"Wow! Cyphertone!" Jarrod whooped, placing his hands Ouija-board fashion on the colored panels, already expert in theory from watching the commercials inserted between slices of Saturday morning cartoons since early October. Cass paused in her admiration of the silk gown Dan had selected for her, to watch her son's enthrallment with the toy.

"I'm glad you remembered to get batteries for it," she said later as they cleaned up the Christmas-morning leavings of bows and boxes and exuberantly rainbowed wrappings.

"It was damned expensive for a game," Dan grumbled. "It'd better last longer than last year's air-hockey game."

"You broke it, Sweets, not Jarrod."

"That's beside the point. Are you going to save all this paper again? You never use it."

"Just the big pieces. And the bows. You never know."

While Jarrod was down the block showing off his new bike to his friends, Dan paused in the clean-up to try out the computer game. When he placed his fingers on the pie-wedge colors nothing lit up. He pressed the panels gently as he'd seen his son do, but still the toy remained silent.

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"Damn, it's broken already."

Cass looked up from her paper folding. "Already? Are you sure? Did you read the directions?"

"Where's the box?"

Cass rooted through the piles of paper. "I think you already burned it in the fireplace."

"I'm so efficient," Dan sighed, replacing the game on top of Jarrod's spoils. "The kid didn't read any directions. How come he knew how to work it right off?"

"The miracle of television. If you got up every Saturday morning at dawn you, too, could become a computer-game expert and be able to sing every cereal jingle on the air as well."

"I think I'll pass. You know what they say about old dogs."

"Let old sleeping dogs lie. Lay?"

"Old dogs, new tricks. You're mixing clichés."

Cass stood and held her new filmy negligee up to her. "If you've heard one cliché you've heard them all. Is this me? Is it really the real me?"

Dan waded through the Christmas paper. "Let's go upstairs and find out," he grinned, nuzzling her neck.

"Ouch, you're sandpapery," Cass giggled, pulling away as Jarrod bounded in.

"Where's the Cyphertone?" the child asked. "Are you guys gonna do mushy stuff all day?"

"Only if your father consents to shave. The Cyphertone is on your pile. Take your plunder up to your room and wash your hands. Dinner's almost ready."

"I wanna show my Cyphertone to Mike and Kevin."

"Later," Cass said.

"But it'll only take a minute!"

Dan cleared his throat. "You heard your mother." How much he sounded like his own father, he thought. Patterns of response learned in childhood. Some day Jarrod would probably say those exact words to his own son. Other classic parental responses were: We'll see. Ask your mother. That's the last time I'm going to tell you. Do it now! When we get home . . . by the time I count to ten . . . how many times do I have to tell you? Apparently enough times until the patterns were transmitted unbidden to the next generation.

Dan lay down his newspaper to watch his son sitting cross-legged on the floor playing the Cyphertone game. It had been two weeks now and the child showed no boredom with the game, unlike his other toys. In fact he seemed increasingly preoccupied with the flashing lights and oddly harmonious sounds. He actually opted to play the game in lieu of watching television at times, a miracle unto itself, Dan thought.

"Let me try it," he said finally, dropping the newspaper. Jarrod seemed not to hear him, continuing to repeat the pattern flashing before him. Each time he made a mistake the computer made a harsh dissonant sound and a new pattern was begun, one light and sound at a time. A green light flashed. Jarrod pushed the green panel and repeated the pattern. A green and yellow light flashed, accompanied by the soft pleasant sounds. Jarrod pressed the green and yellow panels and was rewarded with a third color and sound. When the pattern built to twelve color combinations and sounds

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Jarrod made a mistake and had to start over from scratch.

"Hey," Dan said, getting down on the floor with his son. "Let me try it."

Jarrod was oblivious.

Dan touched him, amazed at the child's deep concentration. "Jarrod?" Only then was the trance-like focus broken. Jarrod looked up at his father and for an instant Dan caught a look in his son's eyes that shocked him. It was as though a stranger was looking at him, someone much older and far wiser than a nine-year-old boy. Then the gaze faded and the child was there again.

"What's the matter, Dad?"

"What? Oh, uh . . . can I try your Cyphertone game? It looks like fun."

"Sure. Here." The boy handed over the toy. "Know how to do it?"

"Of course. Just repeat the pattern, right?"

"Right. And if you goof, it gives you a raspberry sound. Better start with the easy level. You gotta get eleven in the right order to win at the easy level. I'm working on level two. I have to be able to do twenty in a row. So far I can only get to thirteen before I blow it. My unlucky number."

Dan sat cross-legged like his son and placed his hands on the four plastic panels. "Nothing's happening."

Jarrod giggled. "You gotta turn it on." He pointed to the small switch Dan hadn't noticed.

"Oh. Right. Okay Cyphertone, let'er rip." Dan got to five before he messed up, much to his son's glee. Cass came into the living room and stood watching.

"Time for supper, children," she said.

"Damn! You made me miss," Dan said, starting over.

"I did not," Cass argued. "All I said was . . ."

"Hush, I can't talk and . . ." The Cyphertone raspberried him again. Jarrod rolled onto his back, laughing.

"Dinner is on the table," Cass said.

"Inna minute," Dan said. "Let me get to eleven first."

Cass watched in bemused silence as her husband hunched over the game. Each time he got to seven before he pushed the wrong sequence and had to start over. "It'll be leftovers before you win," Cass sighed.

"Shhh . . . it goes faster after you get to five. Did you notice?" Dan said. "If you pause for more than a second you're out."

"Wait till you try level two," Jarrod said. "I know a kid at school who broke through level three. But he's a super whiz at math. Also he takes piano. I think it helps. Dad, can I take piano?"

"What's piano got to do with playing the Cyphertone?" Cass asked.

"I don't know. It's sorta musical. Bobby Avery can do it with his eyes shut, up to ten sometimes. He says it makes a song in his head."

"Will you two be quiet?" Dan grumbled. "I can't concentrate."

Cass looked heavenward. "Why can't you watch the 6-o'clock news on TV like other husbands? I only need one nine-year-old and the position is already filled. Chow is on, gentlemen. Wash up."

"You heard your mother," Dan said to Jarrod.

"You too, Dad."

"Be right there."

* * *

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Cass and Jarrod were at the table eating when Dan sat down, triumphant. "It beeps when you win," he announced. "Got eleven in a row. Not so hard, once you learn to concentrate."

"Only took you thirty-five minutes," Cass agreed.

"You exaggerate. It was only . . ." he glanced at his watch and blinked. "Well, it *seemed* like it was only a couple of minutes. How 'bout that?" The meatloaf was cold but Dan thought it best not to remark on its condition.

"You going after level two, Dad?"

"Sure. Why not? Twenty should be a snap."

Twenty was not a snap. To Dan's chagrin, Jarrod accomplished the feat first and went on to level three which built to a pattern of thirty-two lights and sounds. The last level, level four, was fifty-six flashes, so it was rumored, but no one Jarrod knew had managed that impossibility yet.

"It's all a matter of concentration," Dan explained to Larry Hayes, as they commuted into the city to Vossman Associates, where they worked in the electrical engineering department. "A fascinating game, really. It sort of hooks you. You can't stop once you get started. You just keep wanting to work it, over and over. It's been three months now and Jarrod still hasn't tired of it. He's working on level four now, the highest level. I'm puttering in level three. I don't know if I'll ever retain thirty-two moves at a time in a sequential series."

Hayes chuckled. "My kid wants that game for his birthday. I think it would drive me crazy."

"I'll say this," Dan smiled, "I credit that game for improving Jarrod's grades. I'm not sure how, but the kid is making straight A's for the first time ever. And he begged us, *begged* us, to let him start piano lessons. Said it would help him with the Cyphertone. Can you imagine it? I had to beg *my* parents to let me *quit* violin when I was his age. Strangest game I ever saw."

"Well, our children belong to the computer age, that's for sure," Hayes nodded. "My boy is eleven and he's got four . . . no, five different computer toys and games. Half of 'em I don't know how to work. Makes you feel obsolete, you know? God, whatever happened to baseball and kite-flying, and tag? All that physical stuff? Now all they do is sit around pushing buttons. I'm not sure I like it."

"Dan?" Cass poked her husband in the darkness. "Dan, wake up."

"Wha . . . ?"

"Wake up."

Dan yawned and rolled over. "What's wrong?"

"Listen. Don't you hear it?"

"Hear what?"

"He's at it again."

Dan listened. Faintly he heard the slightly melodious sounds of the Cyphertone, coming from Jarrod's bedroom. Fumbling for the clock in the darkness, he frowned at the luminous dial. "It's after three, for chrissake. What the hell's he doing playing the Cyphertone at three A.M.?"

"I told you I thought I heard it last night, but you said I was nuts. Dan, go take it away from him. This is getting ridiculous. It's all he ever does any-

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more. I'm sick of hearing it. I think it's affecting him."

"How?"

"I don't know. It just . . . he's changing. Haven't you noticed?"

"He's making top marks in school. Maybe we have a budding Einstein on our hands. What's so bad about that?"

"It's not his grades, Dan. It's . . . something else. Have you seen the way he looks after playing that damned game?"

Dan had seen the look in Jarrod's eyes more and more often. It was the same stranger's gaze, but now it lasted longer and faded more slowly after the child surfaced from his intense concentration. He had not mentioned his observation to Cass, thinking it was possibly a figment of his own imagination.

"It's like he's mesmerized," Cass went on. "I can't seem to reach him for a few minutes afterward. I think the game hypnotizes him. I almost have to call him back from somewhere. It's eerie. Surely you've noticed it?"

Dan hadn't had time to bother with the game in months, but he knew vague wisps of that feeling of distance after playing with the flashing lights. He had compared the sensation to that of deep meditation, or at least what he suspected deep meditation must be like, since he had never had the time or inclination to explore yoga or TM or any of the other esoteric mind exercises so popular when he was younger.

"Well, are you going in there, or do I have to?" Cass yawned.

Dan groped for his slippers under the bed, then decided to hell with them. Without bothering to turn on any lights which would leave his pupils screaming for darkness, he padded down the hall to Jarrod's room. The gentle beeps continued. Dan counted them silently at the door until the raspberry sounded after fifty-one.

He opened the door, prepared to congratulate his son for coming close, then reprimand him for his late hours, but the scene before him let all words dissolve unspoken. There in the darkness a small, shadowed figure sat cross-legged in the center of the bed, spine ram-rod straight. As the lights flashed yellow and red and green and blue, they lit up Jarrod's face in a garish way. His eyes stared, unblinking, unseeing, as his hands moved to the colors and sounds. Dan felt a slight chill creep down his neck as he watched the child, a stranger, work the computer at a dizzying speed. Something whispered a warning in the back of his mind. It told him not to disturb the boy under any circumstances. He was to stand quietly and wait until Jarrod . . . returned. To jar him now would interfere with . . . with what? With the transfer . . . He did not question the term, nor why he thought it. What he was positive of was the delicate stage of his son's corporal state. He stood and watched in silence, counting the pattern of lights and notes. Fifty-one, fifty-two, fifty-three . . . and then the soft, chiding series of dissonant beeps scolded the child for his mistake. Jarrod took a deep breath and set the game aside.

"How long have you been watching?" the boy asked, turning on his bedside lamp.

"A few minutes," Dan said, feeling somehow guilty, as though he had intruded upon someone in deep prayer.

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Jarrod looked up at him and Dan felt slightly awed by the intensity of the wise and benevolent gaze. His child was not there, in those eyes, but the being who watched him now was somehow silently reassuring him that all was as it should be.

"Do you know what time it is?" Dan asked at last.

"I don't need much sleep anymore. Very little in fact," Jarrod replied, somber. "I feel quite rested. Does the sound of the game bother you?"

"No . . . Jarrod . . . don't . . . play the game anymore."

"But I'm almost there."

"I know that. I just think . . . you should put it away for a while, that's all."

"If you could reach level four, you could come with me," the boy said quietly.

Dan felt a damp fear settle on his skin. He moved to his son's bed and sat down. "Come with you where, Jarrod?"

"There."

"I don't understand. Where . . . do you go?"

"It's . . ." The child blinked, and the stranger within him faded softly away. "It's . . . somewhere else . . . . They . . . teach us."

"They teach you what?"

"What we have to know."

"Who are *They?*" Dan wasn't sure whether Jarrod was asleep or awake. He was too old for fantasies, having left behind his last invisible playmate when he set out for nursery school five years ago. He must be asleep—sleep-talking instead of sleep-walking, he thought.

"I'm not asleep," Jarrod said, reading his thoughts. "You don't need to be afraid for me. They won't hurt any of us. They're trying to help."

Dan picked up the computer game. "I think you've had enough of Cyphertone for a while."

Jarrod reached out for the object. "No! Please! You can't take it away. I need it. Dad, I'm almost there!"

"The hell you are. Now go to sleep."

"I've gotta have it!" The child who was his son was totally back now.

"Maybe later. Not tonight. Now go to sleep!" With that Dan reached over and turned off the light. "We'll talk about it tomorrow." His father's voice. Exactly the same. How many cliff-hanging emergencies in his own childhood had been shelved "until tomorrow?"

"So that's Cyphertone," Hayes said, as Dan held the game in his lap, on the train.

"This is it. Caught Jarrod playing with it at three this morning. Wide awake. I think. He's up to fifty-three flashes in a sequence. I've got a funny feeling that if he hits the jackpot he'll be carted off to the loony bin. He really had me scared last night."

Hayes reached over and took the game. "How come?"

"I'm not sure. He was rambling on about how 'They' were teaching him something, and that he 'went' some place. He really had me worried, Larry. The damned game is hypnotic, almost like an addictive drug. I took it away from him."

"Sure you're not just jealous that you can't crack level three or whatever? How do you play it?" Hayes punched the panels with no results.

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"I'm not sure I should show you. Imagine the whole country walking around with zombie eyes after breaking through level four."

"Your kid gets zombie eyes?"

Dan reached over and switched on the game. A red light lit up and beeped. Hayes followed the pattern. "I wouldn't say zombie eyes exactly. But . . . they change. I get the feeling somebody else is looking at me—somebody much older and far more intelligent than I am. It's pretty creepy."

"Hush, I'm concentrating," Hayes said.

The ticket conductor came by. "Hey, Cyphertone," he grinned. "My kid has one of those things. Damnedest game I ever saw. He's working on level four and he's just seven years old. So smart he scares me sometimes."

Dan felt the flash of sweat through his clothes. Somewhere in the back of his mind he remembered part of a poem, about music and children and . . . colors and . . .

"I did it!" Hayes crowed. "I got eleven. On to level two."

"The Pied Piper of Hamelin!" Dan said aloud.

"What?"

"A computerized Pied Piper. Cyphertone is . . ." he stopped. Crazy. Absolutely inarguably insane. "Larry, I'm going to be late to work. Tell Wilson. I have to go to the library about something."

There it was:

"His queer long coat, from heel to head
Was half of yellow and half of red . . .
. . . And green and blue his sharp eyes twinkled,
Like a candle flame where salt is sprinkled . . .
. . .And ere he blew three notes (such sweet
Soft notes as yet musician's cunning
Never gave the enraptured air)
There was a rustling that seemed like a bustling
Of merry crowds justling at pitching and hustling,
Small feet were pattering, wooden shoes clattering,
Little hands clapping and little tongues chattering.
And, like fowls in a farmyard when barley is scattering,
Out came the children running.
And all the little boys and girls,
With rosy cheeks and flaxen curls,
And sparkling eyes and teeth like pearls,
Tripping and skipping, ran merrily after
The wonderful music with shouting and laughter."

Dan sat back and ran his fingers over the toy. Was it a toy at all? Or was it something much more? Were children playing a simple child's game, or were they . . . being trained? And if so, by whom, and for what? Were the lights and sounds innocent, random patterns, or were they some kind of code that progressed steadily from Dick and Jane simplicity to infinitely more complex information? Dan pulled from the shelves several books on meditation and hypnosis and checked them out.

"*Meditation And Your Karma*,"

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Hayes read, sorting through the stack of books on Dan's desk. "*States of Consciousness, Programming And Metaprogramming In The Human Biocomputer*. You giving up gothics for some lighter reading, Morgan?"

"Maybe I should be looking into science fiction," Dan muttered, looking up from *Hypnosis And Alpha Waves*. "Better yet, full-fledged fantasy. I think it's loony-tune time."

Hayes pushed the books over and perched on the edge of the desk. The Cyphertone game lay belly-side up in the center of the desk, disemboweled, its batteries piled in a heap. "What did you take it apart for?" Hayes asked. "You can't pirate a copy. It's patented."

"I can't get into it."

"Into what?"

"That . . . thing." Dan poked at the game with a screwdriver. "There is no visible means of prying the thing apart to look at its innards without destroying it. I can remove its batteries. That's it. I'm about ready to take a hammer to it."

Hayes *tsked* and shook his head. "Makes you feel that inferior, huh?"

Dan sat back and placed his hands behind his head. "Larry, I called the toy company that makes those things. I wanted to talk to whoever invented the damned thing. You know what they told me? They said nobody invented it. A *computer* invented it."

"A computer gave birth to little baby computers?" Hayes nodded solemnly. "Well, it had to happen some day. Let 'em start thinking for themselves, the next thing you know, all they think about is sex."

"But nobody knows who fed the information into the computer, so it could come up with the . . . game. Nobody seems to be directly responsible for it."

"So what? It's a helluva toy. Stores can't keep 'em in stock, they sell so fast. I went to five different toy stores looking for a Cyphertone for my kid and they were all sold out. I was put on a waiting list, for crying out loud. They'll call me, they said. For a toy!"

Dan leaned forward and slowly replaced the batteries in the game. "If it *is* a toy," he said.

"What's that mean?"

"Larry . . . let's suppose you were a . . . oh, say a 'missionary', and your job was to go into the jungle, search out the most primitive, savage, superstitious, distrustful, and nasty heathens on the face of the earth. Your mission would be to bring those stone-age minds into the 20th century. You have to educate them, teach them, introduce them to technology so far beyond their understanding that you scare them to death with your every appearance. But it's your job. You have to do it. Because they're going to kill themselves off very shortly in their ignorance. They don't know how to . . . survive in their own backward little culture. They live in their own filth and garbage. They're unbelievably cruel to each other. Their tribal customs are so barbarous that they attack and kill others out of fear and superstition. You get the picture?"

Hayes got up and moved over to a leather chair. "Sounds like a fun weekend."

"Be serious. This is just hypothetical. A supposition. How would you go about accomplishing your assignment?"

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"Well . . . frankly I'd be opposed to it," Hayes shrugged. "I think they should be left alone. I support the law of natural selection. Maybe they're supposed to kill one another off. Maybe they weren't meant to survive."

Dan slowly rubbed the Cyphertone in his lap, as though it were a magic lamp. "No, your personal philosophy can't apply in this situation. You're supposed to save them from themselves. How do you start? Remember, they run away at the sight of you. You can't get near them."

"Do I know their language?"

Dan frowned. "Well, you know *some*thing about them because you've studied them surreptitiously for, oh . . . years, let's say. So you know something of their . . . patterns of communication. But their vocabulary is crude, very limited. It's more advantageous for all involved that they learn *your* language. How would you teach them when you can't even approach them openly?"

Hayes examined a hangnail and then rummaged in a pocket for nail clippers. "Dan, why are you asking me these things? Are you trying to tell me you want to join the Peace Corps?"

"Humor me. I'll explain later . . . maybe."

"Well . . . let's see. I'd have to communicate with them in some way that wouldn't frighten them."

Dan nodded. "Good idea. How?"

"I'd . . . see what made them curious. What things they liked. Like, say they really dug trinkets or mirrors, or tools or . . ."

"Toys?"

"Yeah. Stuff like that. I'd maybe . . . leave stuff in a certain place under a tree till they got to know the spot and came to take away the gifts. Maybe I'd leave food. Things like that."

"But you'd stay out of sight?"

"At first. Then maybe . . . I'd leave a picture of myself tacked to the tree." Hayes beamed at his sudden inspiration. "That's what I'd do. Then later on, I'd show myself . . . just a little, at a distance. Then closer. And so on."

Dan continued to stroke the computer game. "Remember, these are savages. They could kill you out of sheer terror. You've got to lead them into the modern world and you don't have a lot of time in which to do it. They're slaughtering each other daily, and fouling their villages. They're disease-ridden."

"I can't imagine who would want to bother with them," Hayes sniffed. "Oh my God. You're trying to brace me for something. I can tell. Wilson's moving us to a branch office in South America, right?"

"No. Please. Just bear with me. This is important to me like you wouldn't believe."

"Probably not. Okay. Let's see. Not much time . . . then I'd have to reach the ones who'd be least afraid, the ones easiest to teach, the most trusting, the . . ."

"Children?" Dan's knuckles were white as he grasped the Cyphertone.

"Yeah, the kids. I mean, that's what the missionaries do in all those foreign countries, isn't it? Get the kids into missionary schools, teach them Bible songs . . ."

"Good way to teach a language, wouldn't you say?" Dan asked. "Re-

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member your first French phrases in school? Everybody learned Frère Jacques, right?''

''Yeah. And then the kids can teach the parents. Before you know it, voilà, technology; i.e., TV antennas in the jungle. And everybody's saved. The end. Do I get a prize? A commendation? Something?''

Dan got up, moved across the room and placed the Cyphertone in the man's lap. ''Suppose I told you that I don't think this thing is a toy at all . . . that I think it's a . . . tool. A teaching tool. Designed specifically for children. Its purpose is to train the mind so efficiently that a child can learn deep meditation techniques in a very short time. He can accomplish in weeks skills and techniques that take a yoga master years to achieve. What would you say to that?''

Hayes looked down at the colorful object in his lap. ''This? Are you serious?''

Reaching for one of the books on his desk, Dan nodded. ''Listen: 'At the highest stage of meditation, one loses sense of self and identity, joining in a oneness with God. . . .' Jarrod is just this side of Nirvana. About three beeps away to be exact. When his ability to concentrate is adequately . . . trained . . .''

Hayes stared at the toy as though fearful that it would give him an electrical shock if he moved. ''What? What happens?''

''I don't know. I'll lose him. In some way . . . he'll be lost to me forever. I know that much. Larry, I know this sounds as crazy as they come, but I think these 'toys' were dropped on us from . . . some place else.''

''Russia?''

''Farther away than that.''

Hayes lifted the Cyphertone gingerly and placed it back on Dan's desk. ''Just . . . how far away did you have in mind?''

''Oh, a few light years, maybe.''

''Uh huh.''

''You think I've snapped, right?''

''Absolutely. Listen, Dan. . . .''

''I don't care! I think it's crazy, too. But dammit, it makes sense. They're using these things like . . . tuning devices. When a kid's brain is emanating alpha waves or whatever, long enough—*strong* enough—it's like a hot line to . . . God only knows where. Maybe it's a way for them to travel here, for all I know. They get inside kids' heads, set up housekeeping, train them for . . . what's coming.''

''Close encounters of the weird kind,'' Hayes agreed, rubbing his temples. ''You're out of your gourd, buddy. You know that, don't you? You think they're sending their 'missionaries' here to educate the savages?''

''Something like that, yes.''

''Dan, go home. Take a week off. I'll explain to Wilson. It's the Bowers contract. It'll work out. . . .''

''I'm not crazy, Larry.''

''I didn't say you were. You're tired.''

Dan sighed and rubbed his eyes. ''Yes. I am tired. But I'm not crazy.''

''Go home.''

When Dan entered the house, he could hear Cass in the kitchen, humming, as she chopped celery for a salad. The TV was on in the living room, an afternoon game show in progress.

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"Where's Jarrod?" he asked, entering the kitchen.

"Oh! You scared me half to death! What are you doing home so early?"

"Headache. Where's the kid?"

"In the living room, I thought. You want beets with the chops or green beans?"

"It doesn't matter."

"Okay, beans. Jarrod hates beets." Cass felt Dan's forehead. "Hon, you want an aspirin? You don't look good. You really don't."

"I'm all right." He went back into the living room and turned off the TV. Faintly, from somewhere upstairs, he heard the soft beeps of a Cyphertone.

"He borrowed one from a kid down the block," Cass said as Dan took the stairs two at a time. "Said something about breaking through level four. . . . Dan, don't be angry with him. . . ."

As he reached the bedroom door the melodious beeps ceased. Dizzy from the rush of adrenalin, he pushed against the door. It would not open. "Jarrod! Jarrod!" he yelled, heaving his weight against the barrier. Suddenly, with a rush of wind that smelled of clover and ozone, the door banged open. In the center of the bed and somewhat above it, a pale blue shimmer was fading even as Dan stumbled across the room. He lurched toward the Cyphertone which had, moments ago, rested in his son's lap. A small indentation in the bed was still warm. But the child was gone.

Gingerly, Dan sat on the edge of the bed and took the candy-bright toy onto his lap. He sat quietly until his fingers stopped shaking, then whispered, "Hang on, son. Wait for me, Jarrod. I'm coming. Daddy's coming."

Slowly, he began to play the game. ■

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Michael A. Banks

THE BIG BLACK BAG

It's possible
to use something
without understanding it.
Of course, there
can be drawbacks
to that method....

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In my line, I get a lot of crackpots. So I wasn't too surprised when this clown popped through my office doorway and started a magic act. Evidently he'd barged in past my secretary, something I consider a little presumptuous, so I ignored him. Besides, I was busy making out a deposit slip for more money than I usually make in a year—the proceeds from selling Karl Epworth's anti-gravity gadget to a research outfit.

I'm in the invention business, and I sell ideas. Ideas like Epworth's small-scale anti-gravity gizmo, as well as toys, better mousetraps, and better doors for the world to beat a path to. And, as you might imagine, there are a hell of a lot of people who think they've invented something worth a fortune.

More often than not, it seems, they pick me to sell their ideas. And, more often than not, they're a little eccentric. The guy who had just invaded my office, for example. I watched him out of the corner of my eye while I was writing and, though he wasn't dressed for it, he seemed to be doing an old stage-magician routine—pulling an impossible number of large and small objects out of a black valise which was obviously too small to hold them.

I started wondering if perhaps this was a practical joke; I have friends who would do something like this, just for a laugh. If not, I couldn't begin to guess this guy's angle. I finished the deposit slip and leaned back in my chair to watch the show.

I almost fell over when I saw what he'd pulled from the bag. In addition to about two dozen hardcover books, there was a portable fan, three small potted plants, a wall clock, two lamps, and a coffeemaker lying on the floor. And he was still pulling books through the bag's opening. All of this from a valise about eighteen by six by twelve inches. A little too much to write off as an illusion.

A couple more books, and he turned the bag upside down, thumped it, and threw it across the room to my desk. I waited, expecting him to bow; he didn't. He walked over and shook hands instead.

"Good morning," he said, smiling from under a dense growth of beard. He was short and stocky, with a dark head of hair almost as bushy as his beard. He also had one heck of a grip.

I pulled my mangled hand free. It felt like I'd just been introduced to a mid-western evangelist.

"Morning," I replied. "Did you really do that?" I asked, not knowing what else to say.

"Sure! Want me to put it back?"

I looked over the mess on the floor; it looked as if someone had set up for a garage sale. "Yeah. Yeah, I'd like to see that."

He moved around the room—rather fast for a person his size—picking up double armloads of the miscellany and stuffing everything through the bag's opening. It didn't take long.

After he'd finished and set the bag back on my desk, I picked it up. It was heavy—say, thirty pounds—but not as heavy as it should have been. I looked inside; nothing but a sort of vague grayness.

I was ready to start dealing. This guy obviously had something.

"Well," I started, "Mr. . . .?"

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"Cooper," he supplied. "Russel Cooper."

"Yes. Mr. Cooper, this is your lucky day. Since you have obviously developed a potentially marketable device, you are, doubtless, in need of representation. I'm certain that we can easily develop the full potential of this . . . ah, device, using my not-inconsiderable expertise." I stopped to collect my thoughts.

Something had just occurred to me. Whatever the guy had, it was already fully developed, and he could sell it himself, though I doubted he would come out as well on his own as with my help and patent protection.

Still, why was he coming to me? Sure, I could easily market it—it would probably make a hell of a waste-disposal system, for instance—but so could he, saving my cut.

Cooper had been talking. ". . . possible, Mr. Higgen. I'd like to say up front, though, that I'm not as gullible as you might like me to be. I realize what I have here, and the only reason that I want to work with you is to ensure anonymity for myself."

Aha! Stolen merchandise, perhaps? I decided to get to the heart of the matter right away. "Mr. Cooper," I said, "*are* you the inventor of this device?"

Surprisingly, he didn't look offended. "Sure. But there are certain other parties who must not know that the device, the 'Mass/Dimensional Nullifier', as I call it, is being marketed until after it has been made available to whatever will constitute a market for it."

That sounded ominous. "And who," I asked, "might these certain parties be?"

He leaned forward, looking me in the eye. "My current and at least one former employer. I'm an engineer, and in my particular line you have to sign an agreement automatically assigning the rights to anything you develop to your employer; it's required when you take a position."

I nodded. I'd had to sign the same sort of agreement once, to get a job installing and trouble-shooting telephone switchgear.

"Naturally," Cooper continued, "all of the work on the Nullifier was my own, on my own time, and without benefit of my employers' resources. I think I can prove that, but to bring it up before the Nullifier is in the market would weaken my position. Not to mention the fact that, once it's on the market, I'll have made enough money to fight any claims."

A rather over-optimistic viewpoint, but I wasn't about to throw cold water on his plans. He was right; he would make money, and so would I. And, once the shooting started, it would be no skin off my nose; it was *his* fight, and he was going into it with eyes open.

Three days and a lot of brainstorming later, we had a handle on an application. This *would* make a great waste disposal.

There was only one problem; where did the material placed in the bag *go?* Cooper knew how it worked, which was good. In essence, objects, when passed through the bag's opening, which was actually the limit of a "nullifying field," entered another state of existence. Sort of a pocket alternate world. The result

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was achieved by setting up what he called "harmonic vibrations" in the molecular structure of anything contained within the field. It all took less power than a digital watch, since the effect was actually powered by the energy binding atomic components together.

Cooper had explained that he had come across the effect as a result of some research into containing the decay of radioactive elements. Beyond that, he had condescendingly offered to show me the theoretical basis for the effect, knowing that I couldn't understand it.

But we still didn't know exactly *where* objects went, once they entered the field. "Alternate world" was simply a label of convenience. Maybe things didn't go anywhere. You couldn't see into the bag, though you could feel objects, and pick them out by touch, so we knew that the field didn't distort size. A camera placed in the bag, with flash, produced nothing but a totally exposed negative, and there was no detectable radiation, other than normal "background" inside or outside the field.

It bothered us, but not enough to consider giving up on marketing the device. After all, nothing came out of the bag but what we had put into it, and no cataclysmic results were observed when we used it.

Fine. After deciding what to do with the Nullifier, I referred Cooper to the patent attorney two floors up, I sat down and started blocking out *how* to do it. "How-to" is always the hard part, and that's how I make my living.

This would be like shooting fish in a barrel. Call it "The Ultimate Trash Compactor," to help market acceptance. That was important; I'd learned the importance of market acceptance the hard way. If you don't think it's important, try selling a workable anti-gravity device sometime.

The obvious primary market would be municipal and private waste-disposal operations. And chemical plants with hazardous-by-product problems. Not to mention any industry with scrap problems. Eventually, too, homeowners might have Nullifiers. Or, maybe not; that could tend to put waste-disposal operators out of business. Well, let that take care of itself. We would start with large-scale waste-disposal operations.

And we could do it without licensing the right to manufacture the Nullifier. Cooper had assured me that he could construct a field of any size necessary in less than a day, provided a containment structure existed for it. OK, we would sub-contract the building, probably to one of the local steel-building contractors, after which Cooper could move in and do his part. I would organize it all, from selling to construction, and that would be that. As easy as shooting fish in a barrel.

Or so I thought.

It didn't take long to sell the first three units. The biggest garbage-collection operation in the county took one, to be erected at their landfill site. Two smaller towns ordered Nullifiers, too, each after a one-hour demonstration of a prototype unit we'd mounted on the back of a pickup truck. I stopped selling after those three, knowing that they would sell others, and that we had to fulfill

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these commitments before taking on others. The profits were nice.

The building contractor, a small one from the next county, took only five weeks to get the first building up, on the landfill site. I went with Cooper when he installed the Nullifier.

It was a small building, twelve by twenty, and ten feet high. The door—the only door—was twice the size of an ordinary house door. This, we figured, would be big enough to pass anything. Besides, it was about the limit for an opening in the field.

Most of the work consisted of mounting copper mesh in rectangular patterns on the floor, sides, and ceiling. After we'd finished that, Cooper tied in the necessary circuit boards, and it was finished. It was early afternoon by then, and the landfill owner started trucking in garbage as soon as we turned the field on.

Everything went fine for a couple of weeks. The buildings for the two additional nullifiers neared completion, and inquiries began to pour in. I was beginning to think about getting out of the marketing business and taking this up full time.

That was when we found out where objects placed in the Nullifier field went. And it didn't involve a parallel or alternate world. It was something closer to home.

Too close, in fact. The first indication that we had that anything was wrong was the report of "pranksters" dumping thirty tons of garbage on the front lawn of the state capitol. Over the next few days, there was more of the same. Too much more to be coincidence. From all kinds of locations within a hundred-mile radius came reports of garbage mysteriously appearing in front yards, on streets, in houses, stores, and other buildings, even in moving cars.

Cooper figured it out before I did. He had sense enough, fortunately, to get the landfill owners to shut down their Nullifier on some pretext. We didn't dare let them know what was going on, though they might have figured things out for themselves. I don't know. What I did know was that this was going to cost us, even if what had really happened didn't become public knowledge. Insurance wouldn't take care of nonperformance penalties, especially if we stopped work with no good excuse.

Cooper had an idea of what was behind the problem, at least. I had first thought that we had a "matter transmitter" or some such on our hands, but that wasn't quite the truth.

"What is happening," Cooper explained, "is that the Nullifier field creates what I would call a 'congruency' between two points. Do you follow me?"

I shook my head. He picked up a pencil from my desk and, flipping through some papers, found one with some clear space on it.

"OK," he said, drawing a small circle on either end of the paper. "Pretend that this circle is the landfill site, and that this one is the state capitol." I nodded. He picked the paper up, holding it flat in both hands. "Now, to get from this circle to that, you have to travel across the paper, right? Right.

"But, if we turn on the Nullifier, *this* happens." He folded the paper so that the circles touched. "At least, it happens within the field, or relative to the

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viewpoint of an observer within the field; we don't notice a thing. Now, a lot of this is strictly deductive, but it would appear that such a congruency is unstable, which is why there is garbage in more than one place. Congruency is constantly being established, lost, and reoccurring, at random."

I could understand that, but something bothered me. "What about the books and stuff you put in the bag when you were demonstrating it?"

"I can only guess that, once congruency is established, it can be maintained by moving objects both ways, as when I pulled the books back through. But I wouldn't bet on it."

Great, I thought. As easy as shooting fish in a barrel, ha! Sure, maybe, but you have to be careful not to shoot holes in the barrel.

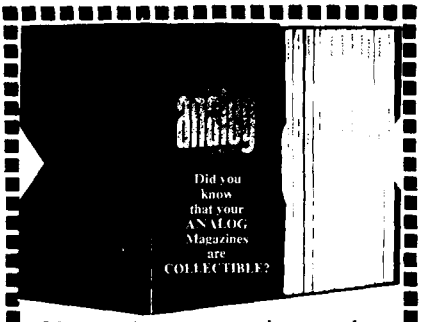
"So," I said, "what do we do?"

"Well," Cooper looked at the ceiling, "I was hoping *you* would come up with something."

So was I; I hated the idea of having to pay for mistakes. I hated even more the idea of losing all the money we might have made. So I came up with something—the beginning of an idea, at least.

"Can we run some tests, to see if what you say is true, that the congruency is maintained by repeated, er . . . 'traffic' between the points of congruency?" What I had in mind was obvious—if we could maintain congruency, this would make a great transport system.

Cooper allowed as how we could, and should, make some tests, so we started right away, with the small Nullifier he had built into the black bag.



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Four days of that, and we agreed that, yes, the congruencies could be maintained, *if*, and only if, we pulled something out of or put something into the nullifier every five minutes. Fine. That told us how often the landfill people used their Nullifier, but it sure as hell didn't look promising in terms of a transportation system. After all, who wanted to use something that they had to fiddle and fuss with around the clock just to keep it working?

No one. It was like having a car or an elevator that has to be kept running all the time. And we couldn't keep running things through the Nullifier; too awkward a proposition, and unreliable.

Or, could we? The answer popped into my mind when I was riding an escalator between floors at a local department store. No, I take that back. I should say that it came to me *because* I was riding the escalator—I don't have the kind of subconcious that works out problems while I sleep.

After all, escalators run continuously. The simple answer to the problem we were dealing with was just that—simple. A conveyor belt would serve to keep the congruency open without the necessity of someone having to constantly be on hand. Two conveyors, one a backup, would do it.

The only problem left now is to establish desirable congruencies. That, according to Cooper, is a trial-and-error matter. A small boom-mounted TV camera extended into the field far enough gives us a picture of where we are and, as long as it isn't someone's house or the middle of a street, we invest a little more time to find out exactly where we are. If it is a usable location, we set up negotiations for use.

Time-consuming, but profitable in the end. There's going to be hell to pay when the trucking companies find out, though. ■

● Our next issue starts a new serial by two writers new to *Analog*, though not to science fiction: David Bischoff and Thomas F. Monteleone. It's a little hard to tell you much about it before it starts without giving away too much of the story, because the true nature of what's going on unfolds gradually as the story progresses. Suffice it to say that a good deal happens along the way, and behind it all lies some intriguing speculation based on very recent developments in real science. And while the story starts out with what appears to be the familiar science-fictional situation of artifact found-in-space, the area of those speculations is *neither* astronomy nor space technology.

The title is *Dragonstar*; you're welcome to venture guesses from there.

We can usually promise you one or two specific items in each "Times to Come," but the more specific we get, the more likely we are to go wrong, since we often have to do some last-minute juggling of contents. Last issue I said this issue would "very probably" contain a new story by Gary Alan Ruse; O.K., *next* month we really *will* get it in (I think). And I'll go right back out on that limb and say that if the space works out right we'll also have stories by Spider Robinson, Joe Haldeman, and Edward A. Byers; plus a fact article by Ruth B. Kaplan on what has been done—and what still needs to be done—in the area of weather control.

IN TIMES TO COME

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THE REFERENCE LIBRARY

By Spider Robinson

Dream Park, Steven Barnes & Larry Niven, Ace, $5.95
Worlds, Joe Haldeman, Viking, $12.95
God-Emperor of Dune, Frank Herbert, Putnam & Sons, price unknown
The World and Thorinn, Damon Knight, Berkley Putnam, $12.95
Windhaven, George R. R. Martin & Lisa Tuttle, Timescape (Pocket), price unknown
The Entropy Effect, Vonda N. McIntyre, Pocket, price unknown
The Cool War, Frederik Pohl, Del Rey, $10.95
Frederik Pohl's Favorite Stories, Berkley, $16.95
King David's Spaceship, Jerry Pournelle, Simon & Schuster, $11.95

Before I get into this month's column, a few prefatory words to all those of you who have written me concerning Robert Heinlein's *The Number of the Beast—*. The words are, "Please stop writing me about this; I don't know any more than you do." Fawcett apparently forgot to put the book into their catalog, then added it two months later when they noticed that the trade paperback had had undisputed possession of the best-seller lists for an unprecedented length of time. At the same time, they remembered to send me a review copy, which arrived by eighth-class mail three months after release (a new record). They ignored all three letters of query I sent them, just as thoroughly as they have ignored the letters of all of you who ended up writing to me. I CAN tell you that yes, there *is* a hardcover version of the book now available in the U.S., priced at $14.95, but whether it will have been released for sale by the time you read this I cannot say: I learned of its existence only because a very dear friend in the industry sent me one as a Christmas present; my local SF bookstore, Odyssey 2000, hasn't been able to get it. In cases like this I think it's best to write to the author with your complaints; he or she may be just as helpless as I am to help you, but of all of us the author is most motivated (and in this case, most capable) to at least see that all the complaints end up getting shoved up something appropriate.

And no, I don't know when the paperback version will be coming out. I don't think anyone on Earth does, either. Good luck, and remember, keep those cards and letters!

And now on to this month's column, whose theme is:

"ENH . . ."

The above word is pronounced with the lips slightly apart, often accompanied by a shrug. (The Italian equivalent is to hold the hand out palm down and shake it slightly from side to side, while pursing the lips.) It is employed when someone asks you, "How was it?" and the response is neither "Terrific!" nor "Terrible!" but something in between. The higher the upper lip is raised, and the more pronounced the shrug, the lower down that spectrum is the assessment. Tilting the head slightly to one side adds a tentative, noncommittal note, perhaps a hint that you do have a more tangible opinion but are not prepared to defend it at this time.

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That evasive syllable "Enh . . ." will be the keynote and the recurring theme of this column. I have here some nine books by some of the mightiest names in the SF pantheon, and better than half of them provoked a response somewhere along the "Enh . . ." spectrum. I made an attempt to order them along that spectrum, starting with "not too bad" and working down to "not too good," but had to give it up. Apples-and-oranges syndrome. Instead I have put them in alphabetical order.

Which brings **Dream Park** up first, and immediately raises a point for clarification. Most of the "Enh . . ." books in this column are "Enh . . ." books at least in part by virtue of the identity of their authors. A book which would be a *most* promising debut for an unknown is an "Enh . . ." if Larry Niven wrote it.

So how do I properly assess *Dream Park*? The title page of the bound galleys I received says "by Larry Niven and Steven Barnes." So does the title page of the manuscript-photocopy which Larry mailed me. But the cover proof taped around the bound galleys reads "by Steven Barnes and Larry Niven," on front and spine. Who got final cut?

The book has a lot going for it. Remember the movies *Westworld* and *Futureworld*? (And, I suppose, their insipid derivative, *Fantasy Island*.) This is sort of that idea *done right*, handled intelligently, written by real science fiction writers. The Dream Park is a place where the wealthy (or very dedicated) can experience fantasy gaming, a la Dungeons & Dragons—but *live*, with total realism, playing against a Game Master whose intent is to "kill" you. (To give an idea of what I mean by "handled intelligently," the explanation for how the Dream Park manages to meet its horrendous expenses is not only ingenious and plausible, but an integral part of the plot.) This is guaranteed candy for all you D & D and computer-gamer and heroic-fantasy types. And of course Something Goes Wrong, and *real* murder enters the Game—and thank God, what Goes Wrong is *not* a fail-safe failing or a computer gone berserk or an evil corporate pig protecting his profits at the expense of his customers, but exactly the kind of thing that usually goes wrong just before someone is murdered.

Wait, there's more. See, each game undertaken at the Dream Park has to take place within the confines of a given myth-system or fictional-universe or . . . well, the best term is the one Heinlein coined in *The Number of the Beast*—: a ficton. Both Games Master and players are bound by the rules of the ficton chosen. If your object is the Holy Grail, you will not meet with automatic weapons; if you seek to plunge the Ring into the fire, you will not be opposed by Conan the Barbarian. But the ficton chosen for the Game in question, out of all the thousands of possibilities a hack writer would have settled for, is a composite of the beliefs of the various Melanesian Cargo Cults, one of the most fascinating reality-systems in recorded history! I knew Larry would get around to writing about the Cargo Cults one day; he mentioned his intense interest in them in an anthology I edited last year, and inspired me to read up a little on the subject.

With all this going for it, how did the book come out "Enh . . ."?

Hard to put my thumb on it. Part of it, I think, is the very fantasy-game underpinning: like any fantasy-game I've ever seen or heard of, there are too damned many characters for my taste. (The Dramatis Personae which is in-

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cluded in the manuscript photocopy but *not* in the galley lists 39 characters.) Neither Barnes nor Niven is overfond of in-depth characterization; they're telling a story here. But, as a result, the book's people become just what the metaphor suggests: pawns, anonymous game-pieces whose triumphs and demises are of mostly intellectual interest. There's enough of them to keep both the Game and the Game Within The Game intricate and complex as hell, on a purely intellectual, puzzle level, and I guess that makes for a great fantasy-game, and maybe that's why I don't play fantasy-games. I read books, and I want to give a damn whether the puzzled people in them ever get it all sorted out.

Almost as bad a weakness is what should have been the best part, the Cargo Cult stuff. The subject is intrinsically fascinating, and the authors have obviously researched it with care and with gusto—yet somehow they fail to fascinate *us*. If you have not already read something about the Cargo Cults, I think it may seem to you a bit contrived and preposterous, and the authors' attempts to explain it and its magnificently wacky logic a bit sketchy. The utter certainty and utter wrongness of the Cargo Cultists is one of the most poignant antinomies on record, the kind of story that either makes you laugh until you cry or vice versa, and it just doesn't come alive in this book somehow.

Virtually none of the players are even vaguely familiar with the ficton through which they are paying enormous sums to stagger (very hard to swallow), and so this is a game where the rules are revealed to us in bits and pieces as we go along—with the added complication of our hero, an undercover investigator, trying to identify and bust a killer without busting up the Game. A very challenging puzzle, if you like them: too challenging for a lazy reader like me.

Features of interest; doesn't quite work.

Now a painful "Enh . . .": Joe Haldeman's long-awaited new book, **Worlds,** subtitled "A Novel of the Near Future."

This is a book I really wanted to like, going in. Joe is a fiendishly entertaining and thoughtful writer who doesn't produce fast enough to suit me, and he is also the man who introduced me to overproof Aussie rum (I think I subsequently made the acquaintance of the burro all by myself). Furthermore, I found a book of mine "quoted" on page two (a brief reference to an orbital complex called "Skyfac"), and I can't tell you how much that tickled me. With great enjoyment I read on, and had just a *wonderful* time for . . . well, 208 galley pages, I don't know how many that'll be in the book.

But there are 235 pages in the galley, and I feel that it all came apart in my hands in that last 27 pages.

The logical thing to do now is to put a Spoiler Warning in bold-face type and then tell you the ending. I am reluctant to do this, because I think if you know the ending going in it will ruin the book for you completely; prevent you from enjoying the good parts. Which I suggest you do: it's an engaging and inventive story. But I think the ending stinks.

For over 200 pages we follow a delightful, original, *interesting* young woman named Marianne O'Hara, as she tries to do a year of postgraduate work on Earth in 2084. Marianne, a brilliant poli-sci student, was born and raised in New New York, an orbiting community inside a hollowed-out asteroid, one of 41 such orbiting Worlds with a total

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population of almost half a million. Their political relationship to Earth is complex and volatile; Marianne's visit is most educational, but not because of the schooling. She becomes, as the jacket copy says, "the unwilling pawn in a struggle for power between the Lobbies, who compose the legitimate government of the United States, and the Third Revolution, a widespread dissident group." Her experiences are convincing and exciting.

Then we get hit with a cosmic Pie In The Face, a bummer ending so out of left field as to resemble ending a play by having the stage collapse without warning. If it is meant to be Grim Warning it fails, for it never addresses the real issues leading up to the final tragedy—and there is no way for us to *profit* from the warning: even a brilliant polisci student will never even smell the disaster coming. The effect is to make all the good stuff that has gone before seem trivial and pointless. I think Joe went for irony over tragedy: his characters neither earned nor ever had the slightest chance to avoid their doom; consequently what they happened to be doing in the months before they were struck down is merely anecdote. When I had taken it for story.

*Features of great interest; sour ending.**

Similarly, **God-Emperor of Dune** suffers from a bad ending—and this is the third Dune book to have that problem. In *Dune Messiah*, several hundred pages of complex conspiracy and intrigue resulted in the use of an atomic bomb to do a job that Moe of the Three Stooges could have accomplished with two fingers. (And why bother blinding a prescient in the first place?) In *Children of Dune*, the rules of the game were changed in the last quarter, when, after more hundreds of pages of equally intricate plotting and counterplotting, the hero suddenly revealed that he had the unsuspected power to become God.

When Frank announced this book, which would return to Arrakis a thousand years later to examine the reign of the immortal invulnerable omniscient sandworm Leto, I thought, "Well, I'll reserve judgment until I see it, but I'll be damned impressed if he can pull it off." It is a bold step to extend an already massive trilogy by a thousand years. For one thing you must cover a lot of history without lecturing. For another you have lost virtually all of your series characters, and must cajole your readers into identifying with a whole new lot. To top it off, your one for-sure recurring character, the focus of the book, *is not a human being*. By definition his nature is something that, no matter how well you depict it, your reader can only guess at. You've run smack into John Campbell's famous challenge: write me something that thinks as well as a human but not like a human.

But—I thought to myself—if Frank can surmount these problems, he will have written the great SF novel of our time. Imagine the effect on a society of having a single consistent ruler for a thousand years. What are the goals of a God? With all the knowledge of all his ancestors, foreknowledge of the future, and centuries in which to mull it over, what might Leto not produce? A science of psychology? A science of

Since this was written, I've learned that Worlds *is the first book of a trilogy. This would mitigate most of my objection—*if *there were some indication on the book's jacket to that effect. Which is not Joe's fault, of course, but the publisher's.*

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ethics? A new emotion? A classless society? A seedless watermelon?

And the result: "Enh . . ."

How *did* Frank solve the problems cited? Well, he ducked the first. There is very little history to pass on because very little has *happened*: the whole Dune ficton seems to have been remarkably stagnant for a thousand years. The planet itself has changed markedly; is now water-rich and green. But Dune society seems to have adapted to Leto's godhood in a single generation and then frozen in place. Also unchanged in the slightest degree by the passage of time are the Bene Gesserit, the Guild, the Tleilaxu, the Ixians, and so on. No population growth, no expansion, no significant new technology whatsoever, no philosophical evolution—absolute stasis. Leto seems to have deliberately, carefully fostered this stasis. Hmmmm. Well, this preserves continuity-of-character, of a kind—for all the social entities named are "characters," of a kind—and furthermore one real human character is also preserved, by Imperial whim. For reasons known only to himself, Leto has been having Duncan Idaho continually reincarnated by the Tleilaxu for the last millennium, ordering a new one every time the old one shows signs of wearing out, raising Duncans, as it were. Why? Well, there we get to the third problem: the ineffable nature of Leto the Worm, God-Emperor of Dune.

I think Frank set himself as impossible a task as Phil Farmer did in the Riverworld series; tackled an insuperable obstacle. Remember how *Star Trek*'s creators came up with that Transporter to save money on special effects—and then in every single goddam script had to stop and explain why the Transporter didn't magically solve all problems? Leto sees all, knows all, has a couple of thousand years of experience to draw on, and is effectively immortal.

To top it off, his body has been transformed into a giant worm (which Frank takes care to assure us has no penis). He is not human, except by distant ancestry. How do you depict a character like that? Frank takes refuge in paradox, in ineffability, in mystery. Leto speaks in parables, opaque Zen koans, and allegories so subtle I didn't know what the hell he was talking about half the time. He is the Perfect Master—yet he seems to be in constant emotional turmoil. His actions seem to defy logic: for example, he encourages and assists enemies to plot against him, bats down their extremely stupid and ill-planned attempts in that direction for a thousand years, then allows (forces) one of the stupidest and most juvenile attempts to succeed, for no reason I could figure out. *All* Leto's actions seem arbitrary and capricious. Ah, but that, we are told, is only on the surface. Beneath it all Leto has a secret purpose, his mysterious Golden Plan. Only the Golden Plan can save the human race from utter annihilation—indeed, Leto accepted the bitter burden of godhood only because his prescient vision told him that the destruction of the race could be avoided in no other way.

But exactly what the hell this Golden Plan is, why it requires all the seemingly meaningless (and horrible) things Leto must do to make it work, what it preserves humanity *from* and what it enables humanity *to* . . . we never do find out. I waded through pages and pages of profound inanities and insane actions in the expectation of an explanation, and don't feel I ever got it. What I got was a pie in the face that raises more questions than the whole preceding book. I'm horrified to say that Frank has made *another* sequel not just possible, but

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essential. The thing is overextended, all the holes are starting to show, and it's been two books since I had any idea where the hell it's all going.

I see that I have spoken entirely negatively. If you have enjoyed all three Dune books so far, you will probably enjoy this one too, perhaps as well; it does well much the same things those books did. I had a lot of mind-stretching exercise trying to get into Leto's head so that I could try and *guess* what kind of game he was playing (all my guesses were wrong). But I have been patiently watching that hat for so long now that a damn big rabbit had better start coming out of it real soon.

The World and Thorinn seems to be the first book publication of a 1968 *Galaxy* serial by Damon Knight, and it was one of the most pleasurable reading experiences I had this quarter. It's a rather lightweight book, simple adventure, but elegantly told and thoroughly entertaining. And dammit, it too ends in midair just as things were getting really interesting. If Knight hasn't gotten around to a sequel in the intervening dozen years, I don't suppose he ever will—but I for one would like to know what happened *next*.

Thorinn is a young man for whom things are not going well when we meet him. His stepfather and stepbrothers, mistaking a natural disaster for divine wrath, seek to placate the gods by dropping Thorinn down an old dry well and sealing it with a stone. *Then* he falls through the bottom of the well. Thus begins an underground odyssey through a series of hidden worlds and odd cultures and strange beings, somewhat reminiscent of John Varley's *Titan*, except that where Herb's Cirocco Jones had to go *up* to find answers, Thorinn must go *down*. (Oh, and Thorinn has not reached puberty.) But it has that same piquant blending of fantasy imagery and SF hardware, that whatever-it-is that keeps you fascinated by the unfolding mystery of a strange place.

And it has a fascinating protagonist: ignorant goodhearted Thorinn happens to be brilliant, and extracts a priceless education from his troubles. Step by step with flawless logic he deduces principles of engineering, construction, aeronautics, guerilla warfare, and a dozen other disciplines, in order to get himself out of scrapes which would have baffled any of his primitive contemporaries—he even teaches himself to make somewhat unsophisticated but clever use of a computer. It's just delightful to watch him reinvent civilization single-handed, getting parts of it endearingly backwards and yet achieving basic understanding of something largely beyond his comprehension.

The problems? Well, the Secret of Thorinn's World which finally gets revealed at the end has severe plausibility problems that Knight ignores. And just as we get to the Answer To All The Mysteries, the story stops. Thorinn ends up right back where he started; we have no explicit assurance of how the central dilemma of Thorinn's World will be resolved; we don't even get to see him confront his kinfolk. And we never do find out what was the source of the mysterious compulsion to *"go down"* which forced him into adventuring at so many different junctures. Also, and finally, I think that even 1968 was a little late in history to ask SF fans to believe that a computer capable of singlehandedly running a planet for eons could be confounded by a yokel with a grade-school paradox.

But all this complaint refers to the last 14 pages. For the preceding 200, I had

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a wonderful time. (Is this starting to sound familiar?)

In addition, the book showcases the extraordinary talent of artist Val Lakey, who has here produced the only genuinely brilliant illustrations I can recall seeing in a science fiction or fantasy novel. All 13 black-and-white illos make me want to take them out of the book and frame them (except that some berk at Jerkley caused text to be printed on the back of each); she's that good. Alert readers will long since have noticed Lakey's exemplary work in the pages of this magazine, and of its sisterzine *Isaac Asimov's Flying Circus*—all I can say is, she has outdone herself here.

All in all, the book comes in on the very high side of "Enh . . ." But with a dozen years for reflection, a writer as good as Damon should have been able to come up with a better way to end this ingenious story.

Features, form and limbs of interest; weak end.

At last, a non-"Enh . . ." entry.

This'll be simple, too: there's not much I need to tell you about **Windhaven.** In the first place, its authors are George R. R. Martin, who just won his, let's see, is it second and third Hugos in a single evening, and Lisa Tuttle, with whom I shared the '74 Campbell Award, who was a Nebula finalist on her own in 1976, and who has been spared a life of full-scale SF superstardom only because she doesn't publish enough. Between them they have enough creative power to grow soybeans on a flat rock, and enough writing skill to make the Federal Budget intelligible.

In the second place, approximately two thirds of *Windhaven* has already appeared right here in *Analog*. Section One, "Storms," ran here as "The Storms of Windhaven" in May 1975, ran second in the voting for the 1976 Best Novella Hugo, and was a 1975 Nebula finalist. Section Two, "One-Wing," appeared just last year in January and February, and I for one enjoyed it more than I had its prequel.

So what do I need to tell you? As expected, Part Three, "The Fall," is even better than the first two, and some skillful rewriting has been done to make it all work as a novel, and the results are terrific. An unqualified rave and an unhesitating recommendation.

There. Wasn't that easy? The excellent and the rotten take little time; it's the midrange of marginal-through-adequate that keeps me up late.

No, I'm not done yet. One of the reasons this book works so well is exactly what was wrong with most of the preceding books: the ending. Those of you who have gotten the impression, from past diatribes of mine, that I insist on sweetness-and-light endings are directed to this book. Its ending is almost unbearably sad—but I do not find it a bummer. Amid the pain and unfairness of it all lie triumph and hope. Anybody can write a story that says "Life stinks"—just keep a good diary. It takes a great writer (or two) to convince you that life can nonetheless be worth living, can, at times, be a magnificent thing.

By golly, this is the third time a genuine SF talent has taken on *Star Trek* for the quick bucks, and produced something superior to the series itself without stretching its ficton all out of shape (not counting the pitifully few times that happened with actual *scripts*). First James Blish managed to bring style, grace, and logic to the job of turning the scripts themselves into stories that a real SF writer could sign his name to without wincing. Then Joe Haldeman

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did a book or two, managing to tell exciting, scientifically accurate stories within that silly, pleasant ficton. Now comes Hugo- and Nebula-winner Vonda N. McIntyre with perhaps the best of the lot to date, **The Entropy Effect.**

Part of what delights me is that it comes closest of the bunch so far to the above-mentioned stretching-the-ficton-out-of-shape. A few of the more retentive, reactionary Trekkers may even be outraged at the minor liberties Vonda has introduced: getting into Sulu's love-life, for example, and giving old Iron Pants Kirk a few swift kicks in the macho. I had a fine, lightweight, painless time. All in all it makes the "Enh . . ." list only because it is a Vonda McIntyre and is only a *Star Trek* book, a pleasant, harmless diversion. Any one of three dozen less talented writers could have turned it out *almost* as well, and that little extra added degree of excellence that Vonda brings to the job, while tasty, is not in my personal opinion enough of an advantage to have been worth tying up the creative powers of a Vonda McIntyre. Which, come to think of it, describes my reaction to all the *Star Trek* books I've ever read: good, but not worth their authors' time.

Then again, "pleasant, harmless diversion" is by no means so easy to come by that it should be sneered at. I hope it sells like hell, enabling Vonda to write something really *good,* of which she has shown herself more than capable.

The Cool War is the first disappointment in a long long while from Fred Pohl. The book just puzzles me. I don't know where the hell it was going or whether it ever got there. It can't seem to decide whether it's zany parody or droll satire or grim pessimism, and doesn't sustain any of the three. It suggests a horribly fascinating new kind of "acceptable warfare" for the Nuclear Age—and then stops short of suggesting anything that could possibly be done to stop or ameliorate it. We fade out with our battered protagonist gamely resolving to keep on trying anyhow, but we have no inclination to bet on him. He admits, for instance, that the best weapon available to him is public opinion.

Fred posits that the military motto of the future will be, "Don't destroy: demoralize." He shows us all the secret services of the world putting their energies into literally aggravating their opponents to death. Spread a little flu virus across a continent, and wreck morale. Spoil the coffee harvest so the enemy will all be grumpy every morning. (Knock off a rock singer who's been giving people optimism and hope?) Stuff like that. Just below the level of combat, based on the theory that sapping morale can crumble an economy more effectively than sending in tanks. Who is to say that such things do not go on now (though not, perhaps, on the scale shown here)?

Into this undeclared, unacknowledged war is pitched a fairly standard Fred Pohl Likable Nebbish, in this case a mild-mannered and quite naive Unitarian minister named H. Hornswell Hake (known, inevitably, as "Horny"). He gets his eyes opened, quite against his will, and very nearly gets his torso opened on several occasions, and soon he finds himself, well, involved emotionally, by a mysterious girl. . . .

Hitchcock kind of thing: innocent bystander falls down rabbit hole into James Bond nightmare and must grow to heroic stature to survive. Horny Hake's life is complicated and recomplicated for many pages, and then a string is pulled in the last chapter and all the immediate complications go

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away—leaving him in almost precisely the predicament he was in at the end of Chapter One, a little wiser perhaps, but still in danger and largely helpless.

Because it is written by Fred it is full of Good Parts, delightful embellishments and grace notes and individual lines that might bear carving in stone. But just as often something would jar. The talking toilet that gives Horny his secret agent instructions, for example, seemed a little heavy-handed.

Rather high up on the "Enh . . ." scale; just didn't jell for me.

Fred Pohl's Favorite Stories, on the other hand, is another flat rave. Ranging back across (as the subtitle says) "Four Decades as a Science Fiction Editor," Fred picked 34 entries from amongst the billions of words he has paid (other people's) money for, 31 stories and 3 novel excerpts (from *Dragon Lensman, Dhalgren,* and *The Short-Timers*). No sense listing all 34 entries, or even all 34 authors: they're all excellent in some way or another. They reflect the extreme catholicity of Fred's tastes in SF. And no matter how good your anthology collection is, there are probably a significant number of great stories here that are new to you. Finally, the introductions and headnotes and autobiographical essays by Fred are as delightful as the stories, even for one who has already read *The Way The Future Was* and assorted other Pohlian reminiscences.

One of the best anthologies of the last few years.

It says here that "a substantially different version of a portion" of Jerry Pournelle's **King David's Spaceship** ran in *Analog* in 1972 under the title "A Spaceship for the King." (I don't go back that far, but the timing suggests that the story had something to do with Jerry's winning the Campbell Award in 1973.) It also says the version-of-portion was published by DAW Books in 1973; I missed that too. But I think that even if you caught one of those previous incarnations you will probably enjoy this new one. I get the impression that this is one of those rare times when that "substantially different" claim is honest and accurate. But there aren't any seams showing; the carpentry is careful.

Set in the same ficton as Jerry's monumental collaboration with Larry Niven, *The Goat in Maude's Eye,* and taking place immediately before the discovery of the Moties, *King David's Spaceship* concerns a backwater little planet, Prince Samual's World, which has just been rediscovered by the expanding Second Empire, and is about to be annexed, like it or not. Now, a planet which is capable of spaceflight at the time it enters the Empire gets *much* better treatment and higher status than one which is not: for one thing it gets to share in Emperial knowledge and technology, which are forbidden to backward worlds by virtue of *Star Trek*'s Prime Directive, "Tamper not with primitives." The kicker is, Prince Samual's World does not have spaceflight—but it is heartbreakingly close, perhaps as little as fifty years away. There is one slim chance that they can steal forgotten lore of the vanished First Empire from a nearby world called Makassar (a world with few enemies, for who wants to be known throughout the Galaxy as an antimacassar? No, forgive me, that's not in the book). With that forgotten lore, the people of P.S.W. might just be able to cobble together a working spacecraft before their planet's official status is frozen. (These people are lorelorn.) (I'm sorry, every so often these parentheses just get away from me.) A wily soldier is required to filch the data hidden on Makassar, and soon

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we're into what Jerry does best: warfare on a primitive planet, entertainingly and educationally filling up many pages, with a very well drawn romantic subplot and some real struggle, as opposed to simple mayhem, for the soldier-hero.

His name is McKinnie, and his problem dovetails with that of his planet. P.S.W. had not yet achieved planetary unification when it was discovered by the Empire, which promptly picked out the strongest contender and used its awesome firepower to make him planetary ruler. McKinnie was, until then, one of the more brilliant fighters for the other side. Are his loyalties to his new King David, or to his own city-state? Worse, he finds that he fits in better on primitive Makassar than he ever did on P.S.W., and there are strong indications that returning home would accomplish nothing useful—so what about McKinnie's loyalty to himself?

This novel is right off the high end of the "Enh . . ." scale, somewhere up in "Good stuff" country. It rates as high on sheer page-turnability as Knight's *The World and Thorinn*, and has a more satisfying ending, involving a workable spacedrive that was first proposed in 1899 A.D. Honest.

I feel somehow as though I should say something in conclusion about the remarkable number of "Enh . . ." books I've been seeing lately, but I'm not sure what. Since I began this column I have mentioned its theme to several friends in the business, in the course of conversation; without exception they have responded with strong agreement. The general consensus seems to be that it has been a mediocre year for movies, music, and science fiction, that as the number of titles published each year has grown, the number of gems published each year has not kept pace. Each of my friends had a different explanation for the phenomenon, and no one agreed with anyone else's theory. (Remember, many of them are *editors*.) One chalked it up to people beginning books during the late great Boom, then finishing them hastily when the hoped-for six-figure advance failed to materialize. (Then what about the six-figure-advance books that were "Enh . . ."?) One argued strongly for slipshod editing (that one wasn't an editor), an unwillingness or inability to explain to a Big Name that this isn't very good. One hypothesized that the Commies have been dosing the beer at SF conventions. One claimed the problem is chickenshit writers playing it safe (that one *was* an editor).

Me, I don't yet have an opinion that I'm sure will survive the six months it takes this column to see print. I look upon it like the weather: there's an explanation, but it probably wouldn't help me much to know it, so I'll just button up my coat and wait for a better day.

I'm a Nova Scotian. They say here, "If you don't like the weather, sit down and have a beer." Now, where's that church-key?■

Ready for Mt. St. Helens, Hurricane Allen, Love Canal.

Red Cross: Ready for a new century.

1981

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BRASS TACKS

Dear Dr. Schmidt:

I just read your editorial, "Non-Logical Processes in Science and Elsewhere," in the February issue. I agree fully with what you said. I had a great deal of respect for John Campbell's ability to stir up thoughtful controversy, and look forward to more of your own efforts.

As for non-logical processes, I suggest you take a look at the books on thinking written by an Englishman named Edward de Bono. He, too, decries the exclusive reliance on deductive logic prevalent today. In his books he talks about a process he calls "lateral thinking," a name which implies a sideways attack on problems rather than the top-down approach.

I think about eight of his books have been published here in the States and twice that number in Britain. You may find him quite fascinating. I was particularly taken by the simple approach he uses in *A Five-Day Course In Thinking*.

You're doing an excellent job on *Analog*. Keep up the good work.

DAVID W. DIAL

Pomona, CA

Dear Stan,

The mix of science fiction/science fact as presently presented suits me to a "T". There aren't that many science fiction magazines being published to allow the loss of any fiction to fact articles which could be found in any of the newer science magazines. As it is now, with a science fact article in most issues along with Pournelle-Stine in friendly conflict, you are doing quite well.

I would like to add my comments to your February editorial. The inability of most pedagogues to understand the imperatives of intuitive reasoning is the reason why most of what is considered advanced education today is a dead end. There are people who can get the correct answer to problems without being able to prove, step by step, how they did it. If, after innumerable testings, the answers are still right, then the answerer should be given credit for it. I knew one such person who would have been declared academically ineligible if he had not learned how to work backward from the answer to the question. Our instructor could not be shown that the intuitive leap was just as correct as the plodding step-by-step normal procedure. As long as the "education" system is run by people who try to teach how to teach instead of by people who search for "Teachers", we are going to stultify more brains than we aerate.

I am an engineer who must, occasionally, use intuition in my work. When I am trying to figure how to erect

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a structure and how much it will cost to do it, there are times when the normal erection scheme will not be the low-cost way. Even if I cannot determine what that low-cost method is immediately, I do know that there is one, and I have to worry it in my mind until it reaches the surface. Once or twice I have developed adaptations of existing equipment in order to make them do what they were not designed to do—but had to do in order to erect the job. If I had been, and I am not unique in this, a follower of pure logical step-by-step reasoning, I would never have tried something different. I would say that most, if not all, construction estimators have to be that way or else many construction projects would never get built.

LARRY ROTHSTEIN

I can remember at least two students from my own teaching experience who frequently reacted frictionally with "The System" because they were highly intuitive. Both could look at virtually any problem we could dish out in introductory physics and write down a correct answer, very promptly and regardless of whether anyone sitting near them could do the problem. Very understandably, from their point of view, they had little patience with being told to write down a lot of intermediate steps which, for them, were extra and unnecessary work. Most of us routinely use various "black boxes," not caring how *they work as long as they consistently get the desired results. That's exactly what these students were doing. Maybe instead of nagging them to "do it right," we should be studying them to find out how they do it "better than right."*

Dear Sirs:

I know you shall need plenty of space for the avalanche of mail in reference to your fantastic production of *The Analog Anthology #1*. So, to make a long accolade short: your selections were most provocative and some quite literally moved me to tears. This was the first time I ever encountered *Analog* (to my shame), but it won't be the last. (My subscription is in the mail.) So, from a satisfied new reader, thank you very much.

P.S. Hopefully *The Analog Anthology #2* isn't too far behind. Congrats on a job well done.

RON E. SANFORD

207-19 104th Ave.
Jamaica, NY 11429

Thank you! No. 2 is in the works.

Dear Dr. Schmidt:

In the November 1980 Brass Tacks, page 176, you raised the question of why we consider technological unemployment as a problem rather than an opportunity. I believe that it is an opportunity, if we can learn how to grasp it. Here, briefly, is my statement of the problem and how to answer it.

Technological unemployment, and indeed any unemployment, is seen as a problem because the overwhelming source of personal income in the U.S. is employment. The compensation of employees in 1978 was 1.3 trillion dollars. No other source is even close. Government transfer payments to individuals was 215 billion dollars. Corporate dividend income was only 47 billion dollars.

Politics is dominated by fear of unemployment, fear of cuts in government transfer payments, and fear of the government taxation needed to support the transfer payments and the artificial employment created by government. Lack of success in fighting inflation is largely due to fears of other problems if inflation were stopped.

New technology which would save

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labor or change its character has been resisted throughout history. Individual workers resist it, labor unions resist it, and governments resist it. Fear of being unable to make a living has been at the root of the resistance.

When machines replace humans, real wealth is still produced. The question is, then, who gets this wealth? In a really free market the owners of the new machines would. Because ownership of the machines was, in the days of the early industrial revolution, highly concentrated, great problems ensued. Workers could barely live, and manufacturers didn't have mass markets for their goods among workers on subsistence wages.

As we know, this situation couldn't and didn't endure. Something had to give, and it did. By various means, the workers received higher and higher compensation. Unemployment compensation and other government transfer payments were created, financed by taxes for the benefit of the unemployed. Mass markets were developed, and the problem of concentrated ownership was greatly reduced.

All was not well, however. As the reward for an economic good or service rises, a larger supply will come forth. If the reward drops, or large taxes are imposed, the supply will drop or even disappear. The problems are clear. Artificially high rewards for labor will call forth more labor than can be profitably employed. Lower rewards for new technology and new machines will prevent the new technology from being developed, and will suppress the use of new machines.

The opportunity is still there, however. If the problem of the highly concentrated ownership of capital were solved, the rewards to capital owners could be increased, and more machines could be employed to replace humans. The answer lies in broadening the ownership of capital and gradually increasing the rewards that go to the owners of capital. If most of us derived our personal income from corporate dividends rather than employment, we would not fear technological unemployment.

There are several practical measures which can broaden capital ownership without taking property away from existing owners. The best known, and most popular so far, is the leveraged Employee Stock Ownership Plan. The Tax Reduction Act Employee Stock Ownership Plan, financed by Federal Investment Tax Credits, is also well known. Other mechanisms exist or are proposed, but this letter is long enough without further details.

If you want to know more, I suggest that you read *The Capitalist Manifesto* by Mortimer J. Adler and Louis O. Kelso, published originally by Random House in 1958, and republished by Greenwood Press, Inc.

DAVID C. THOMSEN
Philadelphia, PA

Dear Mr. Schmidt,

In spite of many excellent, non-sexist stories and articles published this year (1980), I am experiencing a growing sense of unease about *Analog*'s future in my life. I have loved this magazine for many years and would miss it greatly if what I suspect turns out to be true about its direction.

You see, Mr. Schmidt, I can't help looking immediately each month for work done by people like me—female. Yes, I am biased in this regard. But six works with female bylines out of seventy-four authors doesn't seem exactly representative of unprejudiced editing, either.

As noted, the stories have been appreciated. The John Campbell retro-

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spectives, a treat for all of us old fans. It cannot be avoided any longer, though, that there are a lot of readers out here, male and female, who share Janet Hodges's anger at being patronized or ignored because of gender. (The same sentiments apply to race, etc., of course—in spite of whatever conservative backlash is thrashing around at the moment.)

It is obvious that you are doing a fine job of encouraging fledgling authors and choosing high-quality material for publication. But aren't you getting any good submissions from women? Are you encouraging any of them with cold hard cash, too? We are not demanding the whole show, remember.

We simply wish to take fair part—in our heritage and our future, yours and mine together.

DIXIE L. TAYLOR

Red Bluff, CA

Actually, we get surprisingly few submissions from female authors (could this reflect a prejudice about our alleged prejudices?), which is a major reason for the relative imbalance in bylines. Those we do get receive exactly the same consideration as any others. "Unprejudiced editing" means that the gender (or any other aspect of the identity of the author) is not a factor *in selection; we do not and will not consider it, either positively or negatively. Incidentally, our actual percentage of female authors is higher than you realize—there are pseudonymous women lurking behind some of those masculine or noncommittal bylines.*

Dear Dr. Schmidt,

Reference Dr. Carpenter's interesting article in the October 1980 issue ("The Physics of Haunting"): I've been through one fairly comprehensive set of such experiences and have some observations which tend against the physical account of apparitions and sounds. The effects built up over several months and there was time to compare the reactions of a range of people to what was happening. Some people felt nothing; others reported very different intensities; but there was full agreement on what was happening among those who did respond to it—enough to convince us that things really were going on. But the differing reactions were enough to convince that the effects, including "voices," were not "real" in the sense that they would be shared necessarily by all present, or registered by instruments.

The only apparition to present itself was integrated with the scene—moving behind some furniture and in front of others—but was itself just a silhouette. I was convinced in my own mind, even at the time, that it was "unreal" in the sense that it and the accompanying voice were perceptual events only, and could not be recorded objectively by a camera or tape recorder.

I would have dismissed the whole thing as a particularly vivid dream, but that another member of the household, as it turned out, previously had a similar "confrontation," but kept quiet about it.

At no time in the sequence did I feel that we were dealing with a conscious or spiritual entity such as a "soul," but only with an interaction between *our* minds and the locality. Admittedly, I am an atheist, and a believer might have experienced the effects on a different level of awareness. But in relation to the soul hypothesis, it is worth noting how many ghosts are ghosts of *things*—ships, aircraft, headless horsemen (actually the ghost of a suit of clothes!), monks' cowls with no faces, etc.—or else are green ladies, white la-

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dies, soldiers, airmen, and the like, identified not by their features but by their clothing.

The energy required to produce apparitions within the brain, either by direct stimulation or by manipulating electrochemical action, would be much less than that required to generate physical manifestations, as Dr. Carpenter suggests. It's worth noting here Chris Boyce's idea that all psychic and ESP effects are psychokinetic, manipulating the activity of the receiving brain so as to generate the experienced effects. That's particularly relevant because psychokinetic effects are involved on a much larger scale in the related phenomena of poltergeists.

Poltergeist effects are "public" and can be mechanically recorded. But at Worldcon in London, 1965, the late John W. Campbell told me of a film which showed such effects to have a markedly hallucinatory character; e.g., a heavy vase struck a thin partition and shattered without leaving a mark, though it should have gone clean through. It was if the adolescent involved was dreaming the event and imposing the dream on the outside "public" world. Our "haunting" included a couple of similar events which were likewise "impossible"; in one case an unfastened door was struck with great force but did not fly open. (There were four witnesses, and nobody on the other side of the door.)

What we need, to advance our understanding of such phenomena, are electroencephalograph recordings of what is going on in the brain. Unfortunately few things can be less conductive to a "sensitive" atmosphere than being wired up to an EEG machine! But if the true description of the phenomena is that some localities can affect how they are perceived, or what is perceived in them, at least by some responsive minds, and on the other hand some minds can directly affect what happens in the surrounding locality—and that could be proved by correlating such events with brain activity—then the implications would be profound. They would go beyond psychology, biology, and physics, and require a new set of philosophical descriptions of mind, matter and perception.

DUNCAN LUNAN
Irvine, Ayrshire, Scotland

Dear Mr. Schmidt:

I was quite disturbed by a story in your December 1980 issue, "Grain of Truth." It continues to show exact scientists as cold, unemotional, unfeeling, uncaring intellects. In any other magazine this would be bad enough, but in a magazine of science fiction/science fact it comes across as a confirmation of the old stereotypes. As a senior computer science undergraduate, I really must object.

DAVID RUBIN
15 Leverett Ct.
Staten Island, NY 10308

As a physics graduate with several years' professional experience beyond my doctorate, I must object to your objection. The story shows one *scientist in the way you object to. A portrayal of one individual cannot always be taken as a portrayal of a whole group—and from a somewhat lengthier experience I regret to inform you that scientists do include some like that, as well as the ones you and I would rather be associated with. Besides, that story was not intended to be taken as seriously as all that.* ■

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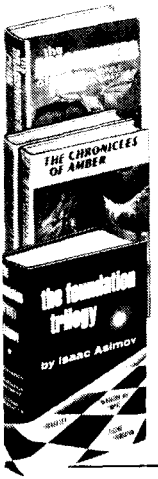

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We allow you at least 10 days for making your decision. If you do not receive the form in time to respond within 10 days and receive an unwanted Selection, you may return it at our expense.

As a member you need take only 4 Selections or Alternates during the coming year. You may resign any time thereafter, or remain a member as long as you wish. One of the 2 Selections each month is only $2.98. Other Selections are slightly higher, but always much less than hardcover publishers' editions. A shipping and handling charge is added to all shipments. Send no money now. Cut off this postage-paid reply card and mail today!

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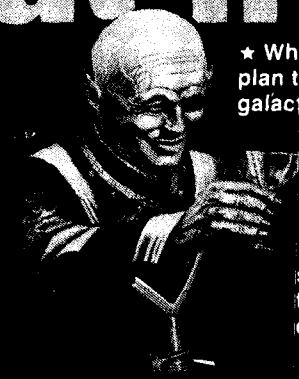

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